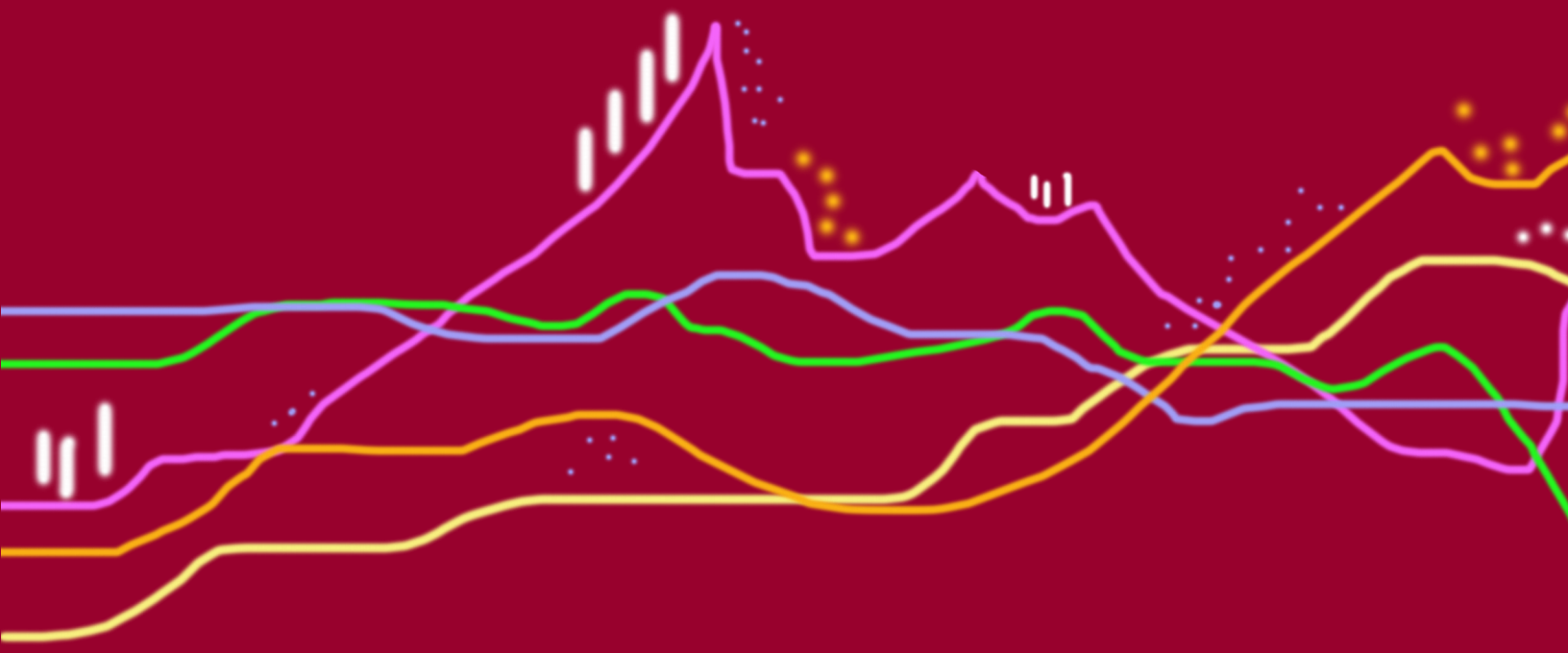
MONITORING *the* FUTURE

NATIONAL SURVEY RESULTS
ON DRUG USE
1975-2015

2015
Volume 2

College Students & Adults Ages 19–55

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Patrick M. O'Malley
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Sponsored by The National Institute on Drug Abuse at The National Institutes of Health

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by

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The University of Michigan
Institute for Social Research

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Chapter 1

INTRODUCTION

Monitoring the Future (MTF), now in its 41st year, is a research program conducted at the University of Michigan's Institute for Social Research under a series of investigator-initiated, competing research grants from the National Institute on Drug Abuse—one of the National Institutes of Health. The study comprises several ongoing series of annual surveys of nationally representative samples of 8th- and 10th-grade students (begun in 1991), 12th-grade students (begun in 1975), and high school graduates followed into adulthood (begun in 1976). The current monograph reports the results of the repeated cross-sectional surveys of all high school graduating classes since 1976 as we follow them into their adult years. Segments of the general adult population represented in these follow-up surveys include:

- U.S. college students,
- their age-peers who are not attending college, sometimes called the "forgotten half,"[1]
- all young adult high school graduates of modal ages 19 to 30 (or 19-28 for trend estimates), to whom we refer as the "young adult" sample, and
- high school graduates at the specific later modal ages of 35, 40, 45, 50, and 55.

In this volume, historical and developmental changes in substance use and related attitudes and beliefs occurring at these age strata receive particular emphasis.

The follow-up surveys have been conducted by mail on representative subsamples of the previous participants from each high school senior class. This volume presents data from the 1977 through 2015 follow-up surveys of the graduating high school classes of 1976 through 2014, as these respondents have progressed into adulthood. The oldest MTF respondents, from the class of 1976, were the first to be surveyed through age 55 in 2013—37 years after their graduation.

Other monographs in this series include the *Overview of Key Findings*,[2] which presents early results from the secondary school surveys; *Volume I*,[3] which provides an in-depth look at the secondary school survey results; and the HIV/AIDS monograph,[4] drawn from the follow-up

[1]Halperin S. *The forgotten half revisited: American youth and young families, 1988-2008.* Washington DC: American Youth Policy Forum; 1998. http://www.aypf.org/resources/the-forgotten-half-revisited-american-youth-and-young-families-1988-2008/

[2]Johnston, L. D., O'Malley, P. M., Miech, R. A., Bachman, J. G., & Schulenberg, J. E. (2016). *Monitoring the Future national survey results on drug use, 1975-2015: 2015 Overview, key findings on adolescent drug use.* Ann Arbor, MI: Institute for Social Research, The University of Michigan, 98 pp. Available at http://monitoringthefuture.org/pubs/monographs/mtf-overview2015.pdf

[3]Miech, R.A., Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2016). *Monitoring the Future national survey results on drug use, 1975–2015: Volume I, Secondary school students*. Ann Arbor, MI: Institute for Social Research, The University of Michigan, 636 pp. Available at http://www.monitoringthefuture.org/pubs/monographs/mtf-vol1_2015.pdf

[4]Johnston, L. D., O'Malley, P. M., Bachman, J. G., Schulenberg, J. E., Patrick, M.E. & Miech R. A. (2015). *HIV/AIDS: Risk & protective behaviors among adults ages 21 to 40 in the U.S.,, 2004–2014* Ann Arbor: Institute for Social Research, The University of Michigan, 120 pp. Available at http://www.monitoringthefuture.org/pubs/monographs/mtf-hiv-aids_2014.pdf

surveys of 21- to 40-year-olds, which focuses on risk and protective behaviors related to the transmission of HIV/AIDS. This year's *Overview* and *Volume I* are currently available on the MTF website[5]; the HIV/AIDS monograph will be published in mid-October, 2016.

To enable the present volume to stand alone, we have repeated much of Chapters 2 and 3 from *Volume I*. Chapter 2 provides a summary of key findings from five of the populations under study (8th graders, 10th graders, 12th graders, college students, and young adults). Chapter 3 outlines the study's design and procedures.

SURVEYS OF YOUNG ADULTS AND ADULTS AGES 35, 40, 45, 50, AND 55

The current young adult sample consists of representative samples from each graduating class from 2002 to 2015, all surveyed in 2015 and corresponding to modal ages 19 through 30. College students are included as part of this young adult sample. The MTF study design calls for annual follow-up surveys of each high school class cohort through modal age 30, based on high school seniors being assumed to be modal age 18. Each individual participates in a follow-up survey only every two years, but a representative sample of people in each individual's graduating class is obtained every year because each cohort's follow-up sample is split into two random samples that are surveyed in alternate years.

Chapter 4 presents results on the prevalence of drug use for this 19- to 30-year-old young adult age group as well as middle adulthood through age 55. Chapter 5 presents the trends of adult drug use and covers young adult use from ages 19 through 28. The use of a somewhat shortened age range for young adults (through age 28 rather than age 30) allows the trend results to begin two years earlier historically, providing trend data starting in 1986 rather than 1988; further, using the 19 through 28 modal age range does not substantially affect the young adult data typically collected for ages 19 through 30.

Studies on substance use and related factors that follow young people into middle adulthood are rare in the field. MTF provides for exceptionally useful analyses of adult substance use as well as many other behaviors and attitudes. After modal ages 29-30, starting at modal age 35, surveys are conducted at five-year intervals. In 2015 the graduating classes of 1978, 1983, 1988, 1993, and 1998 were sent the age-55, age-50, age-45, age-40, and age-35 questionnaires, respectively. These nationally representative data make possible (1) analyses aimed at differentiating period-, age-, and cohort-related change; (2) analyses demonstrating long-term connections between use of various substances at various stages in life and many important potential outcomes (including eventual substance use disorders, adverse health outcomes, and functioning in work and family roles); (3) tracking substance use involvement and how such involvement is affected by transitions into and out of social roles and social environments across the life course; and (4) determining some of the factors in adolescence and early adulthood that are predictive of later substance use, abuse, and dependence.

In this volume, we have used statistical post-stratification to reweight respondent data to adjust for the effects of panel attrition on measures such as drug use, using procedures described in Chapter 3 in the section on panel retention. We are less able to adjust for the absence of high school dropouts who were not included in the original 12th-grade sample. Because nearly all college

[5]Please visit http://monitoringthefuture.org/pubs.html#monographs to access the full text of these monographs.

students have completed high school, the omission of dropouts should have almost no effect on the college student population estimates, but this omission does affect the estimates for entire age groups. Therefore, the reader is advised that the omission of about 8% to 15% of each cohort who drop out of high school likely mean that drug use estimates given here for the various age bands are somewhat low for the age group as a whole. Fortunately, high school drop-out rates continue to decline, from around 15% in 1980 to under 10% in recent years. The proportional effect of missing dropouts may be greatest for use of dangerous drugs such as heroin, crack, and methamphetamine, as well as cigarettes—the latter is highly correlated with educational aspirations and attainment. Nevertheless, even with some underreporting of usage rates, the year-to-year trends observed should be little affected by the limitations in sample coverage.

SURVEYS OF COLLEGE STUDENTS AND NONCOLLEGE PEERS

As defined here, the college student population comprises all full-time students enrolled in a two- or four-year college one to four years after high school in March during the year of the survey. More is said about this sample definition in Chapter 3 on study design. Results on the *prevalence* of drug use in 2015 among college students and also among their noncollege peers are reported in Chapter 8, and results on *trends* in substance use among college students and their noncollege peers are reported in Chapter 9, covering the 35-year interval since 1980.

The MTF follow-up samples have provided excellent coverage of the U.S. college student population for more than three decades (1980–2015). College students tend to be a difficult population to study for a variety of reasons. For a number of years, they were generally not well covered in household surveys, which tended to exclude dormitories, fraternities, and sororities. Further, institution-based samples of college students must be quite large in order to attain accurate national representation because of the great heterogeneity in universities, colleges, and community colleges, and in the types of student populations they serve. Obtaining good samples and high response rates within many institutions also poses difficulties, because the cooperation of each institution must be obtained, as well as reasonable samples of the student body.

MTF draws the college sample prospectively in senior year of high school, so it has considerable advantages for generating a broadly representative sample of college students who emerge from each graduating cohort; moreover, it does so at very low cost. In addition, the "before, during, and after college" design permits examination of the many changes associated with the college experience. Finally, the MTF design also generates comparable panel data on high school graduates who are *not* attending college, an important segment of the young adult population not only in its own right, but also as a comparison group for college students. This is a particularly valuable and rare feature of this research design.

GENERAL PURPOSES OF THE RESEARCH

MTF's research purposes are extensive and are outlined here only briefly.[6] One major purpose is to serve an epidemiological social indicator function that accurately characterize the levels and

[6]For a more complete listing and discussion of MTF's objectives, see Johnston, L. D., O'Malley, P. M., Schulenberg, J. E., & Bachman, J. G. (2006). The aims and objectives of the Monitoring the Future study and progress toward fulfilling them as of 2006 (Monitoring the Future Occasional Paper No. 65). Ann Arbor, MI: Institute for Social Research. Available online at http://www.monitoringthefuture.org/pubs/occpapers/occ65.pdf.

trends in certain behaviors, attitudes, beliefs, and relevant environmental conditions in the various populations covered. Social indicators can have important agenda-setting functions for society, drawing attention to new threats to the public health and estimating the extent of those threats as well as determining where they are concentrated in the population. They are especially useful for gauging progress toward national goals and indicating the impacts of major historical events, including social trends and policy changes. Another purpose of the study is to develop knowledge that increases our understanding of how and why historical changes in these behaviors, attitudes, beliefs, and environmental conditions are taking place. Such work is usually considered to be social epidemiology. These two broad purposes are addressed in the current series of volumes.

Additional etiologic purposes of MTF include helping to discover what types of young people are at greatest risk for developing various patterns of drug abuse, gaining a better understanding of the value orientations associated with various patterns of drug use and monitoring how these are shifting over time. MTF data permit the investigation of the immediate and more general aspects of the social environment that are associated with drug use and abuse, and permit the assessment of how drug use is affected by major transitions into and out of social environments (such as military service, civilian employment, college, unemployment) or social statuses (such as marriage, pregnancy, parenthood, divorce, remarriage). MTF examines the life course of various drug-using behaviors during this period of development, including progression to substance use disorder). This knowledge allows MTF to distinguish such age effects from cohort and period effects that are influencing drug use and attitudes about drug use, to discover the effects of social legislation and changing regulations on various types of substance use, and to understand the changing connotations of drug use and changing patterns of multiple drug use among youth.

We believe that differentiating among period, age, and cohort effects on use of various types of substances and associated attitudes and beliefs has been a particularly important contribution of the project. The MTF cohort-sequential research design is well suited to discern changes with age common to all cohorts (age effects), differences among cohorts that tend to persist across time (cohort effects), and changes common to most or all ages in a given historical period (period effects).

Knowing which type of change is occurring is important for at least three reasons. First, it can help to discover what types of causes account for the change. For example, age effects are often explained by maturation as well as by environmental and role transitions associated with age, as this study has demonstrated.[7,8,9] Second, the type of change can indicate when in the life course the causes may have had their impact; in the case of cohort effects, it may well have been in an earlier point in the life cycle than the age at which the change is actually documented. For example, we know from historical context and MTF data on age of initiation that the decline in cigarette smoking observed among 12th graders in the late 1970s actually reflected a cohort effect that emerged when those teens were younger, in the early 1970s, which was shortly after cigarette

[7]Bachman, J. G., O'Malley, P. M., Schulenberg, J. E., Johnston, L. D., Freedman-Doan, P., & Messersmith, E. E. (2008). The education-drug use connection: How successes and failures in school relate to adolescent smoking, drinking, drug use, and delinquency. New York: Lawrence Erlbaum Associates/Taylor & Francis.

[8]Bachman, J. G., O'Malley, P. M., Schulenberg, J. E., Johnston, L. D., Bryant, A. L., & Merline, A. C. (2002). The decline of substance use in young adulthood: Changes in social activities, roles, and beliefs. Mahwah, NJ: Lawrence Erlbaum Associates.

[9]Bachman, J. G., Wadsworth, K. N., O'Malley, P. M., Johnston, L. D., & Schulenberg, J. E. (1997). *Smoking, drinking, and drug use in young adulthood: The impacts of new freedoms and new responsibilities*. Mahwah, NJ: Lawrence Erlbaum Associates.

advertising was removed from radio and television. So, although we documented a cohort effect at 12th grade, its origins were most likely due to earlier environmental changes. The third reason that knowing the type of change is important is that it can help in predicting future change more accurately. For example, the study has shown that perceived risk often is a leading indicator of change and also that cohort effects help to predict forthcoming changes at later ages. Needless to say, predicting change is extremely valuable to the policy, prevention, and treatment communities. This volume documents some well-established age effects, some important cohort differences that emerged in the 1990s, and recent period effects.

Another important purpose of MTF, related to but distinct from the ones described so far, is to study risk and risk-reducing behaviors associated with HIV/AIDS. This purpose is addressed in the monograph *HIV/AIDS: Risk & protective behaviors among adults ages 21 to 40 in the U.S.*[10] Beginning in 2004, MTF has included questions on the prevalence and interconnectedness of risk and risk-reduction behaviors related to the spread of the human immunodeficiency virus (HIV) which causes acquired immunodeficiency syndrome (AIDS). The questions include drug involvement in general, injection drug use, needle sharing, number of sexual partners, gender(s) of those partners, use of condoms, getting tested for HIV/AIDS, and obtaining the results of such HIV tests. The questions were included in two of the six forms in the follow-up surveys of 21- to 30-year-olds. They were added to an additional questionnaire form for the 21-30-year- olds beginning in 2007, to the age-35 questionnaire in 2008, and then (having shown no deleterious effects on response rate at age 35) to the age-40 questionnaire in 2010.

Readers interested in publications dealing with any of these areas are invited to visit the MTF website at www.monitoringthefuture.org.

[10]Johnston, L. D., O'Malley, P. M., Bachman, J. G., Schulenberg, J. E., Patrick, M. E., & Miech, R. A. (2015). *HIV/AIDS: Risk & protective behaviors among American young adults, 2004-2014.* Ann Arbor: Institute for Social Research, The University of Michigan, 120 pp. Available at http://www.monitoringthefuture.org/pubs/monographs/mtf-hiv-aids_2014.pdf

Chapter 2

KEY FINDINGS AN OVERVIEW AND INTEGRATION ACROSS FIVE POPULATIONS

Monitoring the Future, now having completed its 41st year of data collection, has become one of the nation's most relied-upon scientific sources of valid information on trends in use of licit and illicit psychoactive drugs by U.S. adolescents, college students, young adults, and adults up to age 55. During the last four decades, the study has tracked and reported on the use of an ever-growing array of such substances in these populations.

This annual series of monographs is one of the primary mechanisms through which the epidemiological findings from the Monitoring the Future study (MTF) are reported. Findings from the inception of the study in 1975 through 2015 are included—the results of 41 national in-school surveys and 39 national follow-up surveys.

MTF has conducted in-school surveys of nationally representative samples of (a) 12th-grade students each year since 1975 and (b) 8th- and 10th-grade students each year since 1991. In addition, beginning with the class of 1976, the study has conducted follow-up mail surveys on representative subsamples of the respondents from each previously participating 12th-grade class. These follow-up surveys now continue well into adulthood, currently up to age 55.

A number of important findings are summarized in this chapter to provide the reader with an overview of the key epidemiological results from the study. Because so many populations, drugs, and prevalence intervals are discussed here, a single integrative set of tables (Tables 2-1 through 2-4) shows the 1991–2015 trends for all drugs on five populations: 8th-grade students, 10th-grade students, 12th-grade students, full-time college students modal ages 19–22, and all young adults modal ages 19–28 who are high school graduates. (Note that the young adult group includes the college student population.) *Volume I*, published in May of this year, presents adolescent data on substance use and related factors. *Volume II*, the current volume, covers adolescent data to provide context and then emphasizes biannual data on young adults and college students as well as data on older age groups based on the longer term follow-up surveys, specifically ages 35, 40, 45, 50, and 55, the latter available since 2013.

TRENDS IN DRUG USE—THE ADVENT OF COHORT EFFECTS

A cohort refers to a group of people who were born in the same year (a birth cohort) or, in this case, are in the same graduating class (a class cohort). The longitudinal data of MTF are well suited to show cohort effects—differences among cohorts that tend to persist across time. Cohort effects are distinguished from changes with age common to all cohorts (age effects) and changes common to most or all ages in a given historical period (period effects).

Early in the 1990s, we reported an increase in use of several illicit drugs among secondary school students, and some important changes among the students in terms of certain key attitudes and beliefs related to drug use. In the volume reporting 1992 survey results, we noted the beginning of

such reversals in both use and attitudes among 8th graders, the youngest respondents surveyed in this study, and also a reversal in attitudes among 12th graders. Specifically, the proportions seeing great risk in using drugs began to decline, as did the proportions saying they disapproved of use. As we suggested then, those reversals indeed presaged "an end to the improvements in the drug situation that the nation may be taking for granted."[1(p.6)] The use of illicit drugs rose sharply in all three grade levels after 1992, in what we refer to as the "relapse phase" in the larger epidemic of illicit drug use, as negative attitudes and beliefs about drug use continued to erode. This pattern continued into the mid-1990s, and beyond that for some drugs.

Then in 1997, for the first time in six years, the overall level of ***illicit drug*** use finally showed a decline among 8th graders. Although marijuana use continued to rise that year among 10th and 12th graders, their use of several other drugs leveled off, and relevant attitudes and beliefs also began to reverse in many cases. In 1998, illicit drug use continued a gradual decline among 8th graders and also started to decline at 10th and 12th grades. In 1999 and 2000, the decline continued for 8th graders, while use held fairly level among 10th and 12th graders. In 2002 and 2003, use by 8th and 10th graders decreased significantly, and use by 12th graders finally began to drop; declines then continued for all three grades in 2004 and for several years thereafter. But in 2008, illicit drug use increased once again among 8th and 12th graders, followed by some increase in 8th and 10th grades in 2009, signaling an end to the immediately preceding period of decline. In 2010 the overall level of illicit drug use increased for all grades, although the increase was significant only among 8th graders. In 2011 the increase continued among 10th and 12th graders and declined some at 8th grade. Publicity around legalizing medical, and in some cases recreational, use may have served to normalize use of marijuana, the most widely used of all illicit substances.

In the past four years, levels of overall illicit drug use among teens have shown a slight downward trend in all age groups. (The 2013 level is an exception and shows a slight increase that resulted from an expansion of the question on amphetamines to include more examples of these drugs.) During this time period the marijuana prevalence has decreased at a slower rate than it has for other substances such as cigarettes and alcohol, perhaps due to the publicity surrounding state laws on medical and recreational marijuana use. Whether illicit drug use and especially marijuana use begin to increase in coming years as more states legalize recreational marijuana use is a matter to be clarified with continued monitoring.

As will be illustrated below in the discussion of specific drugs, the increase in use of many drugs during the 1990s among secondary school students, combined with fairly level use among college students and young adults, resulted in some unusual reversals in prevalence levels by age (see Figure 2-1). In the early years of the epidemic, illicit drug use levels were clearly higher in the college-age group (and eventually the young adults) than they were among secondary school students. But by the late 1990s, the highest levels of active use (i.e., use within the prior year or prior 30 days) were found in the late secondary school years. In fact, in 1996 and 1997 both 10th and 12th graders actually had higher annual prevalence levels for illicit drug use (i.e., higher percentages reporting any use within the prior year) than either college students or all young adults. This changed somewhat after 2001, as the earlier, heavier-using cohorts of adolescents began to

[1] Johnston, L. D., O'Malley, P. M., & Bachman, J. G. (1993). *National survey results on drug use from the Monitoring the Future study, 1975-1992. Volume I: Secondary school students.* (NIH Publication No. 93-3597). Rockville, MD: National Institute on Drug Abuse

comprise the college student and young adult populations, while at the same time use among the incoming secondary school students was declining.

- As can be seen by the divergence of trends for the different age groups in what follows, something other than a simple secular trend in drug use was taking place; important cohort differences were emerging. (Again, an MTF cohort refers to a group of people who are in the same graduating class. A secular trend is a trend across time that occurs simultaneously across multiple cohorts and multiple age groups.)

- In 2015, the rank order by age group for annual prevalence of using ***any illicit drug*** was college students (41%), 12th graders and 19- to 28-year-olds (both at 39%), 10th graders (28%), and 8th graders (15%). With respect to using ***any illicit drug other than marijuana*** in the past 12 months, prevalence ranged from 19- to 28-year-olds and college students (19-20%) to 12th graders (15%), 10th graders (11%), and finally 8th graders (6%).

- From the early 1990s until 1997, ***marijuana*** use rose sharply among secondary school students, as did their use of a number of ***other illicit drugs***, though more gradually. As previously stated, we have called this period a "relapse phase" in the longer term epidemic. An increase in marijuana use also began to occur among U.S. college students, largely reflecting "generational replacement" (i.e., a cohort effect), wherein earlier cohorts were replaced in the college population by more recent ones who were more drug-experienced before they left high school. This resurgence in illicit drug use spread up the age spectrum in a reversal of the way the epidemic spread several decades earlier. In the 1960s the epidemic began on the nation's college campuses, and then diffused downward in age to high school students and eventually to middle school students. This time the increases began in middle schools and radiated up the age spectrum. The graduating class cohorts in the middle and late 1990s carried with them the pattern of heavier drug use that emerged while they were in secondary school in the early 1990s.

 Increases during the 1990s in use of ***any illicit drug*** (including use of ***marijuana*** and use of ***other illicit drugs*** treated as a class) were substantially larger, in both proportional and absolute terms, in the three secondary school grades than in either the college or young adult populations. Among college students and young adults, the annual prevalence of use of ***any illicit drug*** held remarkably stable from 1991 through 1997, at the same time use rose appreciably among adolescents (see Figure 2-1). We predicted that, as generational replacement continued to occur, we would likely see some increase in use of illicit drugs by the young adults. As would be expected given their younger age range (19–22), the increase happened sooner and more sharply among the college students than among the young adults in general (age range 19–28). Peak levels (since 1990) in annual prevalence of ***any illicit drug*** were reached in 1996 among 8th graders, in 1997 among 10th and 12th graders, in 2001 among college students (before leveling for some years), and in 2004 (before leveling) in the young adult segment. Similarly, the more recent declines in use among secondary students have thus far shown up only modestly and briefly among college students, and hardly at all among young adults (see Figure 2-1). In the last few years, including 2015, the five populations do not show any consistent trends.

Again, the earlier diverging trends across the different age strata clearly show that changes during the 1990s reflected the emergence of some important cohort effects rather than broad secular trends that would have appeared simultaneously in all of the age groups. During all of the previous years of the study, the use of most drugs moved in parallel across most age groups, indicating that secular change was prevailing then.

- Similar to the use patterns for illicit drugs, the trend for ***cigarette*** smoking evidenced a generational replacement effect during the 1990s in that college students showed a sharp increase in smoking beginning in 1995, as the heavier smoking cohorts of secondary school students from the early to mid-1990s entered college. This has been a more typical pattern of change for cigarettes, however, since differences in cigarette smoking levels among class cohorts tend to remain through the life course and also tend to account for much of the overall change in use observed at any given age.

 In the early 1990s, cigarette smoking among 8th and 10th graders rose by about 50%—a particularly sharp and worrisome rise (based on 30-day prevalence levels shown in Table 2-3, and daily and half-pack levels shown in Table 2-4); MTF was the first study to draw national attention to this momentous development, a finding that was widely covered in the media and had substantial impact on national policies and policy-related developments that followed. Smoking also rose among 12th graders, beginning a year later.

 The increase in current smoking ended among 8th and 10th graders in 1996, among 12th graders in 1997, and among college students in 1999. The nation then entered a period of appreciable decline in smoking levels that first began among 8th graders in 1997 and radiated up the age spectrum as those cohorts aged. (The 30-day prevalence in 8th grade fell by more than 80%, from 21% in 1996 to 3.6% in 2015.) Among the college and the young adult strata, the declines have been less sharp so far, but they are continuing. The 30-day smoking prevalence for college students in 2015 (11%) was down more than half from the recent peak of 31% in 1999, with the decline accelerating after 2005 as the cohort effect worked its way up the age bands. Smoking among the young adult subgroup has dropped by almost one half (to 17% by 2015) since its recent peak of 31% in 1998. Among secondary school students smoking has steadily declined for the past two decades, including a significant decline in past 30-day smoking from 2014 to 2015 among 12th grade students (from 13.6% to 11.4%). The smoking levels among secondary students are at the lowest ever recorded, with declines from the peak years of 1996-97 of about 80% for 8th and 10th graders and two-thirds for 12th graders. In 2015 there were further declines in all five populations, including the significant decline among 12th graders.

- During the 1990s, the annual prevalence of ***marijuana*** use tripled among 8th graders (from 6% in 1991 to 18% in 1996), more than doubled among 10th graders (from 15% in 1992 to 35% in 1997), and nearly doubled among 12th graders (from 22% in 1992 to 39% in 1997). Among college students, however, the increase in marijuana use, presumably due to a generational replacement effect, was much more gradual. Annual prevalence of use rose by about one third, from 27% in 1991 to 36% in 1998. Marijuana use began to decline in 1997 among 8th graders and then did the same in 1998 among 10th and 12th graders. The rate of decline was rather modest, however, perhaps due in part to effects of the public

debates over medical use of marijuana during that period. In 2001, use remained level in all three grades, but between 2001 and 2004 all three grades showed significant declines in their annual prevalence of marijuana use, with the proportional decline greatest among 8th graders. Eighth graders exhibited the steadiest long-term decline from their recent peak in 1996, a decline of more than four-tenths by 2007. After 2007 use began to increase among 8th graders (see Figure 5-4a in Chapter 5). Declines among 10th and 12th graders started a year later and accelerated after about 2001; between approximately 1997 and 2008, annual prevalence levels fell by 31% and 18% for 10th and 12th graders, respectively. All three grades exhibited slight increases in annual prevalence after the mid-2000s, although the increases were uneven. From 2014 to 2015 levels of use did not significantly change among secondary school students, while among the older samples annual prevalence of marijuana increased, by 2.4 points (s) to 34% among young adults generally and by 3.5 points (ns) to 38% among college students in particular. This increase specific to the older age group may represent a cohort effect—a continuation of the higher levels of marijuana use in this cohort that was first observed when it was younger in 2008-2011—and/or an effect generated by the recent publicity and debates about recreational marijuana use which may have affected the marijuana attitudes and behaviors of the older groups more than those of adolescents.

Current daily marijuana use in adolescent and young adult groups rose substantially after 1992, reaching peak levels in a somewhat staggered fashion as that just described (see Table 2-4 and Figure 5-4a in Chapter 5). Daily use began a slow decline after 1999 among 8th graders until 2007, after 2001 until 2009 among 10th graders, and after 2003 until 2010 among 12th graders, consistent with a cohort effect pattern. Use at all three grade levels was fairly level after 2004. In 2010 daily use at all three grade levels increased significantly and it increased further in grades 10 and 12 in 2011 and 2012, while holding steady in 8th grade. In 2014 the prevalence of daily marijuana use declined in all three grades, with a significant decline in 10th grade; these levels remained essentially unchanged in 2015. The 2015 daily prevalence levels in grades 8, 10, and 12, respectively, are 1.1%, 3.0%, and 6.0%. *In other words, about one in every seventeen high school seniors is a daily marijuana user.* (Additional important information relating to students' cumulative daily marijuana use over longer periods of time among middle and high school students is provided in Chapter 10.) College student and young adult levels of daily use showed an overall increased from 2007 to 2015, from 3.5% to 4.6% among college students and from 5.0% to 6.8% among young adults. In general, prevalence of daily marijuana use was slow to decline, when annual and 30-day prevalence figures were dropping. Although the levels today are low relative to the peaks reported in the late 1970s, the 6.6% figure for 12th graders in 2011 was the highest observed in some 30 years. The fact that daily marijuana use was rising through 2011 in all three grades serves as a reminder that a relapse in the epidemic of marijuana use, as occurred in the early 1990s, could still occur. The role of the many debates on legalizing marijuana for medical use, the actual legalization for recreational use by adults in some states, and the experiences those states have with the new laws likely will have an impact on present and future secular trends and possibly cohort effects in use.

- The level of perceived risk associated with using marijuana fell during the earlier period of increased use in the late 1970s, and fell again during the more recent resurgence of use in the 1990s. Indeed, perceived risk among 12th graders began to decline a year *before* use began to rise in the upturn of the 1990s, making perceived risk a leading indicator of change in use.[2,3] (The same may have happened in 8th grade, but we do not have data starting early enough to check that possibility.) The decline in perceived risk halted after 1997 for 8th and 10th graders, and annual prevalence began to decline a year or two later. Perceived risk also declined prior to the recent rebound in marijuana use. Again, perceived risk has been a leading indicator of change in use, as it has proven to be for a number of drugs. As discussed in Chapter 8, these attitudes, as well as the behaviors that they predict themselves, show evidence of cohort effects over the past decade and a half. Perceived risk of regular marijuana use has been declining in recent years, and in 2015 levels were at or near the lowest ever recorded by the survey. In 12th grade the decline from the previous year was statistically significant. These low levels of perceived risk substantially increase the probability for future increases in marijuana prevalence.

 Personal disapproval of marijuana use slipped considerably among 8th graders between 1991 and 1996 and among 10th and 12th graders between 1992 and 1997, as use rose. For example, the proportions of 8th, 10th, and 12th graders who said they disapproved of trying marijuana once or twice fell by 17, 21, and 19 percentage points, respectively, during their respective intervals of decline. Subsequently, disapproval began to rise among 8th graders after roughly 1997 and continued through 2007, while it began to rise in the upper grades in 2002 and also continued through 2007 among 10th and 12th graders, as use declined gradually. Since 2007 or 2008 there has been some reversal on this attitude as well as in use, with disapproval falling steadily in the upper grades and less consistently in grade 8 (see Figure 8-1b in Chapter 8). From 2014 to 2015 the decline of disapproval of regular marijuana use continued in 10th and 12th grades and did not change in 8th grade. The one-year declines in disapproval were not statistically significant. Despite these declines, more than 70% of students in each grade continue to disapprove of regular marijuana use.

- ***Synthetic marijuana***, so named because it contains synthetic versions of some of the cannabinoids found in marijuana, is a recent and important addition to the smorgasbord of drugs available to young people in the US. These designer chemicals are sprayed onto herbal materials that are then sold in small packets under such brand names as Spice and K-2. They have been readily available as over-the-counter drugs on the Internet and in venues like head shops and gas stations. While many of the most widely used chemicals were scheduled by the Drug Enforcement Administration in March of 2011, making their sale no longer legal, purveyors of these products have skirted the restrictions by making small changes in the chemical composition of the cannabinoids used. Use of these products was first measured in MTF in 2011 in a tripwire question for 12th graders, asking about their frequency of use in the prior 12 months (see Table 2-2). Annual prevalence was found to be 11.4%, making synthetic marijuana the second most widely used class of illicit drug

[2]Bachman, J. G., Johnston, L. D, O'Malley, P. M., & Humphrey, R. H. (1988). Explaining the recent decline in marijuana use: Differentiating the effects of perceived risks, disapproval, and general lifestyle factors. *Journal of Health and Social Behavior, 29,* 92-112.

[3]Bachman, J. G., Johnston, L. D, & O'Malley, P. M . (1998). Explaining recent increases in students' marijuana use: Impacts of perceived risks and disapproval. *American Journal of Public Health, 88,*887-92.

after marijuana that year. In spite of the DEA's scheduling of the most common ingredients, use among 12th graders remained unchanged in 2012, with 11.3% annual prevalence. Eighth and 10th graders were also asked about use of these drugs in 2012, and their annual prevalence levels were 4.4% and 8.8%, respectively, making synthetic marijuana the second most widely used illicit drug among 10th graders, as well, and the third among 8th graders behind marijuana and inhalants. In 2013 use dropped appreciably in all five populations, including statistically significant drops among 12th graders, college students, and young adults. These declines continued in 2014 with significant drops in prevalence among young adults, college students, 12th and 10th graders (a decline among 8th-grade students was not statistically significant). Efforts by the DEA and various states to make their sale illegal may well have had an impact. In 2015 prevalence continued to decline for 8th, 10th, and 12th graders, although none of the one-year declines were statistically significant. Among young adults and college students prevalence has leveled, with signs of a possible reversal in course with a slight uptick of 0.2 points (ns) for young adults and 0.6 (ns) for college students. There is a relatively low level of perceived risk for trying synthetic marijuana once or twice, despite growing evidence of serious problems resulting from the use of these drugs.

- Among 12th graders, the proportions using ***any illicit drug other than marijuana*** in the past twelve months rose from a low of 15% in 1992 to a high of 21% in 1999 (see Table 2-2); these levels were substantially below the 34% peak level reached two decades earlier, in 1981. All of the younger groups showed significant increases between 1992 and 1997, with use beginning to increase in 1992 among 8th graders, in 1993 among 10th and 12th graders, and in 1995 among college students—reflecting strong evidence of a cohort effect. Use peaked in 1996 among 8th and 10th graders, in 1997 among 12th graders, around 2004 for college students, and in 2008 for young adults. Since 1996 the 8th graders have shown a gradual but considerable decline of one half in their use of illicit drugs other than marijuana, treated as a class (13.1% annual prevalence in 1996 to 6.3% in 2015). The decline among 10th graders paused from 1998 to 2001 with a net decline of about a third in annual prevalence from 18.4% in 1996 to 11.3% in 2008; use leveled again for several years and then declined further in 2011. It now stands at 10.5%. Twelfth-grade use also showed some decline beginning after 2001 (21.6%) but stands just 6.4 percentage points lower (15.2%) in 2015. College students so far have shown little change over the course of the survey and have hovered between 19% and 21% since 2013 (when the questions were last updated). Use among young adults varied between the narrow range of 17% and 21% from 2003 to 2015.

- Between 1989 and 1992 we noted an increase among 12th graders, college students, and young adults in their use of ***LSD***, a drug quite popular in the late 1960s and early 1970s. In 1992 the newly added populations (8th and 10th graders) were also showing an increase in LSD use; for several more years, modest increases persisted in all five populations. Use of LSD peaked in 1995 among college students and young adults and in 1996 among 8th, 10th, and 12th graders, after which LSD use gradually declined in all five populations until 2005 for 8th, 10th, and 12th graders. Overall, the pattern for LSD use seems more consistent with secular change than a cohort effect. The different age groups moved in parallel for the

most part, likely in response to historical events in the environment, including a sharp reduction in LSD availability after 2001.

The proportion of 12th graders seeing great risk associated with trying LSD declined by 4.3 percentage points between 1991 and 1992, just prior to the significant increase in LSD use in 1993. The decline in perceived risk continued through 1997, halted in 1998, and has resumed since 2009. The proportion of 12th graders disapproving of LSD use began to decline in 1992, and continued to decline through 1996.

Because LSD was one of the earliest drugs to be popularly used in the U.S. drug epidemic, young people in the 1990s may have been relatively unaware of the risks of use. They had less opportunity to learn vicariously about the consequences of use by observing others around them or to learn from intense media coverage of the issue, which occurred some years earlier. We were concerned that this type of generational forgetting of the dangers of a drug, which occurs as a result of generational replacement, could set the stage for a whole new epidemic of use. In fact, perceived harmfulness of LSD began to decline after 1991 among 12th graders. Perceived risk and disapproval among 8th and 10th graders, first measured in 1993, both showed declines until 1997 or 1998, after which they leveled among 10th graders but then declined considerably more among 8th graders. In 2004, twelfth graders' personal disapproval of trying LSD increased significantly, with little change since. Because the decline in use in the last few years has generally not been accompanied by expected changes in these attitudes and beliefs, we suspected that some displacement by another drug might have been taking place, at least through 2001. The most logical candidate is ecstasy (MDMA), which, like LSD, is used for its hallucinogenic effects; ecstasy was popular in the club and rave scenes, and was very much on the rise through 2001. After 2001, a sharp decline in the reported availability of LSD in all five populations (which corresponded to the closing of a major LSD lab by the Drug Enforcement Administration) very likely played a major role in the sharp decline in use of LSD among all groups. However, we want to caution that 8th graders' attitudes, in particular, are changing such as to make them receptive to LSD use some time in the future, should a plentiful supply re-emerge. Fortunately, availability of LSD has recently been at or near the lowest levels ever recorded by the survey, although 2015 brought slight, non-significant increases in 10th and 12th grades.

- Questions about the use of ***MDMA***, which goes by the street name "ecstasy," have been included in the follow-up surveys of college students and young adults since 1989; however, because of our concern about stimulating interest in an attractive-sounding and little-known drug, these questions were not added to the secondary school surveys until 1996. From 1989 to 1994, the annual prevalence levels tended to be quite low in the older age groups for which we had data, but in 1995 these levels increased—from 0.5% in 1994 to 2.4% in 1995 among college students, and from 0.7% to 1.6% over the same time span among young adults generally.

 When usage data were first gathered on secondary school students in 1996, the 10th and 12th graders actually showed higher levels of annual use (both 4.6%) than the college students (2.8%). MDMA use then fell steadily in all three grades between 1996 and 1998,

though it did not fall in the older age groups (see Table 2-2). But between 1998 and 2001, use rose sharply in all five populations. In fact, annual prevalence more than doubled in that three-year period among 12th graders, college students, and young adults, and nearly doubled in the lower grades. In 2000 even the 8th graders showed a significant increase in use. Since the peak highs in 2001 annual MDMA use has declined overall, with a slight increase around 2010 that proved fleeting.

In 2015 annual prevalence of MDMA declined significantly and substantially, by 37% in 10th grade and by 28% in 12th grade. These declines are based on measures that included "Molly" as an example street name of MDMA, measures that were introduced in the survey in 2014. (Molly is supposed to be a stronger form of MDMA than ecstasy.) Per our custom when introducing new question wording, in 2014 we included the newly worded question on a random half of the surveys and the other half served as a control with the old version of the MDMA question. All 2015 MDMA questions include the "Molly" street name and are compared to the 2014 measures that also include the "Molly" wording. The substantial decline in annual prevalence in 2015 suggests that any new popularity to MDMA brought by its new branding appears to have been transitory.

MDMA use has been moving fairly synchronously among all five populations since 1999, which suggests a secular trend (some change in events in the social environment) that affected everyone. An important change during this period was the increasing availability of information on the adverse effects of ecstasy use via stories in the popular media, dissemination of the scientific evidence by the National Institute on Drug Abuse, and an anti-ecstasy media campaign by the Partnership for a Drug-Free America and the Office of National Drug Control Policy, initiated in 2002.

Availability of MDMA increased dramatically through 2001, as reported by 12th graders and substantiated by law enforcement data on ecstasy seizures. Of the 12th graders surveyed in 1991, only 22% thought they could get MDMA fairly easily, but a decade later (in 2001) 62% thought that they could. After 2001, however, perceived availability began decreasing in all three grades, possibly due in part to the steep decline in the number of users who serve as supply points for others. The decreases continued through 2012 in the lower grades. In 12th grade, the decline in perceived availability continued through 2009, then leveled at about 36%. Introduction of the street name "Molly" did not lead to any appreciable change in availability trends in 2014 or afterwards. (See Figure 8-6 in Volume I, Chapter 8 for a graphic presentation of the trends in MDMA use, availability, and perceived risk for 12th graders.)

Perceived risk for MDMA rose sharply after 2000, no doubt contributing to the rapid decline in use seen after 2001. In 2015 the perceived risk of MDMA increased non-significantly among students in both 10th and 12th grades. This slight increase is a reversal of a long-term decline in perceived risk apparent in all grades since 2005. It is possible that students associate the term "Molly" with greater risk for MDMA use, and this rebranding of MDMA may in fact lead to a more dangerous reputation and lower levels of use.

- Between 1982 and 1992, among 12th graders levels of ***amphetamine*** use in the past 12 months (other than use that was ordered by a physician) fell by nearly two thirds, from 20.3% to 7.1%. Levels among college students fell even more over the same interval, from 21.1% to 3.6%. During the relapse phase in the drug epidemic in the 1990s, annual amphetamine use increased by about half among 8th and 10th graders between 1991 and 1996, and also increased among 12th graders and college students between 1992 and 1996. After 1996 the age groups diverged, with amphetamine use declining gradually and substantially among 8th graders—where use is now a fraction of what it was in 1996—but continuing to rise among 12th graders (and eventually 10th graders), college students, and young adults until about 2002. The declines continued in the upper grades through about 2008 but through 2013 for 8th graders. Since 2009, annual prevalence has increased among 12th graders (from 6.6% to 7.7% in 2015), perhaps as a result of more students using amphetamines to help their academic work. Among students in college, amphetamine use rose even more sharply from 5.7% in 2008 to 9.7% in 2015, likely for the same reason.[4]

 Young adults, who include the college students, showed less of an increase over the same interval, from 5.3% in 2008 to 7.9% in 2015. The pattern of change across age groups suggests a cohort effect at work for amphetamine use. Since the late 1990s there has been a greater difference between use among 8th graders and use by older students, suggesting that an age effect has emerged, possibly due to the older students becoming more likely to use amphetamines to aid their academic performance. ("To help me study" was the most highly endorsed reason 12th graders gave for amphetamine use in 2015.)

 Among 12th graders, the increase in nonmedical use of amphetamines (and a concurrent decrease in disapproval) began in 1993; this followed a sharp drop in perceived risk a year earlier (which, as we have noted for a number of drugs, often serves as a leading indicator). Following a period of decline, perceived risk among 12th graders increased gradually from 1995 through 2009.[5]

- Use of the stimulant drug ***Ritalin*** outside of medical supervision showed a distinct increase around 1997—with annual prevalence among 12th graders going from 0.1% in 1992 to 2.8% in 1997—and then stayed level for a few years (see Appendix E, Table E-2[6]). Because of its increasing importance, a differently structured question was introduced for Ritalin use in 2001 (2002 in the follow-ups of college students and young adults). This new question, which we prefer to the original, does not use a prior branching question and produced somewhat higher prevalence levels. Results from the new question suggest an ongoing decline in Ritalin use, with prevalence levels in 2014 less than half of what they were when first measured in 2001-2002 for all groups except the young adults.

[4] Arria, A. M., O'Grady, K. E., Caldeira, K. M., Vincent, K. B., & Wish, E. D. (2008). Nonmedical use of prescription stimulants and analgesics: associations with social and academic behaviors among college students. Journal of Drug Issues, 38(4), 1045-1060.

[5] In 2011 the question on perceived risk was modified to include Adderall and Ritalin as examples, which seems to have lowered the level of perceived risk (pep pills and bennies were deleted from the list of examples that same year).

[6] As discussed in Appendix E, the absolute prevalence rates for Ritalin are probably higher than the statistics indicate, but the trend story is likely quite accurate. See Table 2-2 for more accurate estimates of the absolute annual prevalence rates in recent years; these estimates are based on a new question that does not require the respondent to indicate some amphetamine use before being branched to a question about Ritalin use.

- Another stimulant used in the treatment of the symptoms of attention deficit hyperactivity disorder (ADHD) is the amphetamine drug ***Adderall***. A new question on its non-medical use was introduced in 2009; annual prevalence levels in 2009 through 2014 were higher than those for Ritalin in all five populations. This suggests that Adderall to some degree replaced the use of Ritalin and may help to account for the declines that we have been observing for the latter drug. Annual prevalence of Adderall follows the general trends described above for amphetamines, with decreasing levels in 8th grade by 50% from 2009 to 2015, and an increasing level in 12th grade from 5.4% to 7.5% during the same time period. The absolute prevalence levels for Adderall in 2015 are fairly high among young adults (7.7%) and college students (10.7%).

- ***Methamphetamine*** questions were introduced in 1999 because of rising concern about use of this drug; but an overall decline in use has been observed among all five populations in the years since then. In 2015 annual use in all five populations was very low —particularly among college students (0.5%). These substantial declines occurred during a period in which there were many stories in the media suggesting that methamphetamine use was a growing problem—an example of the importance of having accurate epidemiological data.

- Measures on the use of ***crystal methamphetamine*** or ***ice*** (a crystallized form of methamphetamine that can be smoked, much like crack) have been included in MTF since 1990. The use of crystal methamphetamine increased between the early and late 1990s among the three populations asked about their use: 12th graders, college students, and young adults. However, use never reached very high levels. The estimates are less stable than usual due to the relatively small samples asked about this drug, but it appears that among 12th graders crystal methamphetamine use held fairly steady from 1999 through 2005 (when it was 2.3%); since then it has declined by roughly two-thirds, to 0.8% in 2014. Use rose somewhat among college students and other young adults until 2005, before dropping substantially since then. After their peak levels were reached in 2005, college students and young adults showed substantial drops in annual prevalence to 0.5% or less by 2015 (see Table 2-2).

- ***Inhalants*** are defined as fumes or gases that are inhaled to get high, and they include common household substances such as glues, aerosols, butane, and solvents of various types. Among 12th graders there was a long-term gradual increase in the use of inhalants (unadjusted for nitrite inhalants) from 1976 to 1987, followed by a leveling for a few years and then a further increase in the early 1990s. This troublesome increase in inhalant use also occurred among students in the lower grades, and was followed by a reversal in all 3 grades after 1995. After reaching a low point by 2002 or 2003 in grades 8, 10, and 12, use of inhalants increased some in all grades, but then declined in all grades. Annual prevalence is now at the lowest point in the history of the study for all three grades at 5%, 3%, and 2% in grades 8, 10, and 12 respectively. Perceived risk for inhalant use among 8th and 10th graders declined fairly steadily after 2001, quite possibly as a result of generational forgetting of the dangers of these drugs; by 2015 the percent of 8th and 10th graders seeing great risk in trying inhalants fell by 12 and 7 percentage points. A new anti-inhalant campaign could well be effective in offsetting this decline in perceived risk in recent years, much as a similar campaign appeared to do in the mid-1990s.

- ***Amyl and butyl nitrites***, one class of inhalants, became somewhat popular in the late 1970s, but their use among students has been almost eliminated in the years since then. The annual prevalence among 12th-grade students was 6.5% in 1979 but only 0.9% in 2009. (Because of this decrease in use, and to allow for the addition of other questions, the questions on nitrite use were dropped from the study in 2010.) When nitrites were included in the definition of inhalants, they masked the increase that was occurring in the use of other inhalants, because their use was declining at the same time that the use of the other inhalants was increasing (see Figure 5-4c).

- ***Crack cocaine*** use spread rapidly from the early to mid-1980s. Still, among 12th graders, the use of crack remained relatively low during this period (3.9% annual prevalence in 1987). Clearly, crack had quickly attained a reputation as a dangerous drug, and by the time of our first measurement of perceived risk in 1987, it was seen as the most dangerous of all drugs. Annual prevalence dropped sharply in the next few years, reaching 1.5% by 1991, where it remained through 1993. Perceived risk began a long and substantial decline after 1990—again serving as a driver and leading indicator of use. (The decline in perceived risk in this period may well reflect generational forgetting of the dangers of this drug.) Annual prevalence among 12th graders rose gradually after 1993, from 1.5% to 2.7% by 1999. It finally declined slightly in 2000 and then held level through 2007. Since then, some additional decline has occurred. In 2015 annual prevalence for crack cocaine was at 1.1%.

 Among 8th and 10th graders, crack use rose gradually in the 1990s: from 0.7% in 1991 to 2.1% by 1998 among 8th graders, and from 0.9% in 1992 to 2.5% in 1998 among 10th graders. And, as just discussed, use among 12th graders peaked in 1999 at 2.7% and among young adults at 1.4%. Since those peak years, crack use has declined appreciably—by more than half among 8th, 10th, and 12th graders—yet it held fairly steady among college students and young adults, at least until 2007, when use among college students finally began to decline. The 2015 prevalence levels for this drug are relatively low—between 0.2% and 1.1% in all five groups. Twelfth graders have the highest prevalence. Annual crack prevalence among the college-bound has generally been considerably lower than among those not bound for college. Among 12th graders the levels of use in 2015 are 0.7% for college-bound and 2.2% for noncollege-bound.

 We believe that the particularly intense and early media coverage of the hazards of crack cocaine likely had the effect of capping an epidemic early by deterring many would-be users and motivating many experimenters to desist use. As has been mentioned, when we first measured crack use in 1987, it had the highest level of perceived risk of any illicit drug. Also, it did not turn out to be "instantly addicting" upon first-time use, as had been widely reported. In some earlier years, 1994 and 1995 for example, 3% of 12th graders reported ever trying crack; however, only about 2% used in the prior 12 months and only about 1.0% used in the prior 30 days. It thus appears that, among the small numbers of 12th graders who have ever tried crack, the majority of those who tried it did not establish a pattern of continued use, let alone develop an addiction.

Perceived risk and disapproval associated with crack dropped in all three grade levels in 1993, foretelling the rise in use that occurred in all three grades between 1994 and 1998 (1999 in the case of the 12th graders). Because more than a decade had passed since the 1986 media frenzy over crack and its dangers, it is quite possible that generational forgetting of the risks of this drug contributed to the declines in perceived risk and disapproval. Indeed, perceived risk of crack use eroded steadily at all grade levels from 1991 (or 1992 for 12th graders) through 2000. There has not been much systematic change in risk or disapproval of crack since then.

- Use of ***cocaine***[7] in general began to decline a year earlier than crack, probably because crack was still in the process of diffusing to new parts of the country, being still quite new. Between 1986 and 1987 the annual prevalence for cocaine dropped dramatically, by about one fifth in all three populations being studied at that time—12th graders, college students, and young adults. The decline occurred when young people finally began to view experimental and occasional use—the type of use in which they thought they would be most likely to engage—as more dangerous. This change was probably influenced by the extensive media campaigns that began in the preceding year, but also almost surely by the highly publicized cocaine-related deaths in 1986 of sports stars Len Bias and Don Rogers. By 1992 the annual prevalence of cocaine use had fallen by about two thirds among the three populations for which long-term data are available (12th graders, college students, and young adults).

 During the resurgence of illicit drug use in the 1990s, however, cocaine use in all five populations increased once again, both beginning and ending in a staggered pattern by age, consistent with a cohort effect. Use rose among 8th graders from 1991 to 1998, among 10th and 12th graders from 1992 to 1999, among college students from 1994 to 2004, and among young adults from 1996 through 2004. As with crack, all five populations showed some decline in cocaine use in 2008 through 2011 and a levelling over the next two years. In 2015 little change in annual prevalence was apparent in 8th, 10th, and 12th grades, but overall increases from 2013 to 2015 among both college students and young adults are a cause for concern. Annual prevalence levels in 2015 were 0.9%, 1.8%, 2.5%, 4.3%, and 5.7% for the five populations, respectively. For a few years (1996–1999) 12th graders had higher prevalence than did the young adults but, because of the staggered declines in use, young adults have had the highest prevalence in all years since then (see Table 2-4).

 The story regarding attitudes and beliefs about cocaine use is informative. Having risen substantially after 1986, the perceived risk of using cocaine showed some (nonsignificant) decline in 1992 among 12th graders. In 1993, perceived risk for cocaine powder fell sharply in all grades and disapproval began to decline in all grades, though not as sharply as perceived risk. During this time cocaine use was making a comeback. The decline in perceived risk had virtually ended by 1995 among 8th graders, by 1998 among 10th graders, and by 2001 among 12th graders, suggesting a cohort effect at work in this important *belief*, which tends to drive use. Tenth graders' perceived risk for trying cocaine powder rose

[7]Unless otherwise specified, all references to cocaine concern the use of cocaine in any form, including crack.

further after 2007, and 12th graders' disapproval of trying cocaine also has increased in recent years.

The perceived availability of cocaine among 12th graders rose steadily from 1983 to 1989, suggesting that availability played *no* role in the substantial downturn in use that occurred after 1986. After 1989, however, perceived availability fell some among 12th graders—which may be explained in part by the greatly reduced proportions of 12th graders who said they have any friends who use, because friendship circles are an important part of the supply system. After 1995, availability began a long and substantial drop among 8th graders, as it did after 1998 among 10th graders and after 2006 among 12th graders.

- Use of ***PCP***, measured and reported only for 12th graders and young adults, fell sharply among 12th graders between 1979 and 1982, from an annual prevalence of 7.0% to 2.2%. It reached a low point of 1.2% in 1988, rose some in the 1990s during the relapse period in the drug epidemic, reaching 2.6% by 1996, and has since hovered at about 1% for the past decade. For young adults, annual prevalence has fluctuated between 0.1% and 0.6%, but has remained quite low in recent years, standing at less than 0.05% in 2015.

- The annual prevalence of ***heroin*** use among 12th graders fell by half between 1975 (1.0%) and 1979 (0.5%), then stabilized for 15 years, through 1994. Heroin use was also stable in the early 1990s among the other four populations covered here (see Table 2-2). Then, in 1994 for 8th graders and in 1995 for all other groups, use suddenly increased, with prevalence doubling or tripling in one or two years for 12th graders, college students, and young adults, and then remaining at the new higher levels among all five populations for the rest of the decade. After the period 1999 to 2001, heroin use fell back to lower levels than were observed in the mid- to late-1990s. Most of that decline was in heroin use without a needle, which we believe was largely responsible for the increase in use in the first half of the 1990s. In sum, all age groups except for the young adults had annual levels of heroin use in 2014 that were well below recent peaks (by roughly one half to two thirds). Young adults have remained at peak levels (0.4–0.6% in 2008–2015), perhaps due in part to a cohort effect working its way up through the age spectrum. Twelfth graders did show a significant increase to 0.7% annual prevalence in 2010 for heroin use with a needle, though there was no evidence of such an increase in any of the other four populations, which left us cautious about that finding. However, the 2011 prevalence provided some confirmation that an increase did occur—annual prevalence was at 0.6%, which, except for 2010, was higher than any level reported since 1995 when this question was first asked. There is little evidence of any ongoing trend at present—indeed, the 12th graders' annual prevalence for heroin use with a needle was 0.3% in 2015, suggesting that if there was an increase in use, it was short-lived. All five populations show annual prevalence levels at 0.5% or less in 2015.

 Two factors very likely contributed to the upturn in heroin use in the 1990s. One is a long-term decline in the perceived risk of harm, probably due to generational forgetting, because it had been a long time since the country had experienced a heroin epidemic along with accompanying publicity about its casualties. The second factor, not unrelated to the first, is that in the 1990s the greatly increased purity of heroin allowed it to be used by means

other than injection. This may have lowered an important psychological barrier for some potential users, making heroin use less aversive and seemingly less addictive and less risky in general, because avoiding injection reduces the likelihood of transmission of HIV, hepatitis, or other serious blood-borne diseases. The introduction of additional questions on heroin use in 1995 showed that significant proportions of past-year users in all five populations were indeed taking heroin by means other than injection at that point (see Table 2-2, and Chapter 4 here and in *Volume II* for details).

The risk perceived to be associated with heroin fell for more than a decade after the study began, with 60% of the 1975 twelfth graders seeing a great risk of trying heroin once or twice, and only 46% of the 1986 twelfth graders saying the same. Between 1986 and 1991, perceived risk rose some, from 46% to 55%, undoubtedly reflecting the newly recognized threat of HIV infection associated with heroin injection. After 1991, however, perceived risk began to fall once again (to 51% by 1995), this time perhaps reflecting the fact that the newer heroin available on the street could be administered by methods other than injection. Between 1996 and 1998, perceived risk among 12th graders rose—possibly as the result of an anti-heroin campaign launched by the Partnership for a Drug-Free America in June 1996, as well as the visibility of heroin-related deaths of some celebrities in the entertainment and fashion design worlds (what we call the "unfortunate role models"). The perceived risk of trying heroin decreased among 12th graders in 1999, however, foretelling a significant increase in their use of the drug in 2000. In 2001, as the perceived risk of trying heroin increased slightly, 12th-grade use declined significantly. In recent years there has been an increase in the perceived risk of heroin, with an increase in the percentage of 12th grade students seeing "great risk" in trying it from 58% in 2010 to 64% in 2015.

Questions about the degree of risk perceived to be associated with heroin use were introduced into the questionnaires for 8th and 10th graders in 1995. The questions asked specifically and only about use "without using a needle" because we thought this was the form of heroin use of greatest concern at that point. (Similar questions were asked of 12th graders, as well, in one of the six questionnaire forms used in 12th grade.) In general, perceived risk for ***heroin use without a needle*** began rising after 1995 and then leveled. Perceived risk held fairly steady among 8th and 10th graders since it was first measured. A decline in 2015 of 2.7% in risk of trying heroin without a needle among 12th grade students was not statistically significant, but warrants close monitoring in the coming years.

- The use of ***narcotics other than heroin*** is reported only for 12th graders and older populations because we believe that younger students are not accurately discriminating among the drugs that should be included or excluded from this general class. Use declined gradually over most of the first half of the study in these three older groups. Twelfth graders had an annual prevalence in 1977 of 6.4%, which fell to 3.3% by 1992. But after about 1992 or 1993, all of the older age groups showed continuing increases for a decade or more, through 2003 or 2004, before stabilizing. Updating the list of examples given in the question stem in 2002 (to include Vicodin and OxyContin) led to an increase in reported prevalence. After a considerable increase in use from 1992 through 2001, during the relapse phase of the general epidemic and going beyond it, the use of narcotics other than heroin remained relatively constant at high levels through 2010. Since 2012 levels of use have

declined in every year in each of the populations of 12th graders, college students, and young adults. In 2015 the annual decline among young adults was statistically significant.

The specific drugs in this class are listed in Table E-4 in Appendix E. Among these, ***Vicodin, codeine, OxyContin***, and ***Percocet*** are commonly mentioned by 12th graders in recent years. In 2013 ***hydrocodone*** was added to the list of specific narcotics other than heroin and was the most frequently mentioned in both 2013 and 2014, and in 2015 it shared the lead with codeine.

- In 2002, specific questions were added for ***Vicodin*** and ***OxyContin***. The observed prevalence levels suggest that these two drugs likely help to account for the upturn in use of the general class of narcotics other than heroin. In 2003, Vicodin had attained surprisingly high prevalence levels in the five populations under study here— annual levels of 2.8% in 8th grade, 7.2% in 10th grade, 10.5% in 12th grade, 7.5% among college students, and 8.6% among young adults. In 2015 prevalence levels were down for all age groups and stood at 0.9%, 2.5%, 4.4%, 1.6%, and 3.8%, respectively. OxyContin started with lower annual prevalence levels than Vicodin across all age groups in 2002, but given the highly addictive nature of this narcotic drug these levels were not inconsequential.

 Annual prevalence for OxyContin increased in 2003 with slight further increases and leveling through 2011. Since then its use has declined overall, although the decline has not been smooth. Prevalence levels in 2015 were 0.8%, 2.6%, 3.7%, 1.5%, and 2.5% for 8th, 10th, and 12th grades, college students, and young adults. Because OxyContin has received considerable adverse publicity in recent years, it is possible that perceived risk (which we did not measure for this drug until 2012) increased. But because its use appears to have originated in several fairly delimited geographic areas, it seems likely that OxyContin was diffusing to new communities for some time, which may have delayed the turnaround in its use. We believe a similar process happened earlier when crack use and ecstasy use were rising. Questions on perceived risk of Vicodin and OxyContin were added to the 8th- and 10th-grade questionnaires in 2012; perceived risk is relatively low in both grades.

- Annual prevalence of ***tranquilizer*** use among 12th graders saw a long and substantial decline from 11% in 1977 to 2.8% in 1992. After 1992, use increased significantly among 12th graders as did most drugs, reaching 7.7% in 2002 (but the question was revised slightly in 2001 to include Xanax as an example of a tranquilizer, so a small portion of the increase may be an artifact). Since then, annual prevalence has leveled or even dropped a bit (4.7% in 2015). Reported tranquilizer use also increased modestly among 8th graders, from 1.8% in 1991 to 3.3% in 1996, before declining to 2.6% in 1998. It remained between 2.4% and 2.8% until 2011, when it began a decline; it is now at 1.7% in 2015, the lowest level observed since 1991 when 8th graders were first surveyed. As with a number of other drugs, the downturn in use began considerably earlier among 8th graders compared to their older counterparts. Among 10th graders, annual prevalence remained stable between 1991 and 1994 at around 3.3%, and then increased significantly to 7.3% by 2001 (possibly including some artifact, as noted above). Since 2001 tranquilizer use has declined very gradually in all three grades. After a period of stability, college student use showed an increase between 1994 and 2003 (to 6.9%), more than tripling in that period. Since then there has been a

gradual decline there as well, to 4.3% by 2015. For the young adult sample, after a long period of decline, annual prevalence more than doubled between 1997 and 2002 to 7.0%, with a slight, overall decline thereafter to 5.0% in 2015. Thus, while there was a considerable increase in use in all five populations, which reflected in part a cohort effect that first began in the early 1990s among 8th graders, that increase is clearly over and there has been some downward correction in recent years. Most of the reported tranquilizer use in recent years has involved ***Valium***, ***Xanax***, and more recently ***Klonopin*** (see Table E-3 in Appendix E).

- The long-term gradual decline in ***sedative*** (***barbiturate***) use among 12th graders, which has been observed since the start of the study in 1975, halted in 1992. (Data are not included here for 8th and 10th graders, again because we believe that these students have more problems with proper classification of the relevant drugs.) Use among 12th graders then rose considerably during the relapse phase in the drug epidemic, from 2.8% in 1992 to 6.7% by 2002—but still well below the peak level of 10.7% in 1975; use has shown a modest decline since 2002, and in 2015 it declined another 0.6 points (s) to 3.6%. The 2015 annual prevalence of this class of drugs was highest among 12th graders (3.6%) as compared to young adults (2.7%) and college students (2.3%). Use among college students began to rise a few years later than it did among 12th graders, again likely reflecting a cohort effect, but by 2011 it was at its lowest point since 1998. There followed a small increase from 2012 to 2013. Among young adults, sedative (barbiturate) use increased since the early 1990s, rising from 1.6% in 1992 to 4.4% in 2004. It stands at 2.7% in 2015, after declining some in recent years.

- ***Methaqualone***, another sedative drug, has shown a trend pattern quite different from barbiturates. Methaqualone use rose among 12th graders from 1975 to 1981, when annual prevalence reached 7.6%. Its use then fell sharply, declining to 0.2% by 1993 before rising some during the general drug resurgence in the 1990s, although only to 1.1% by 1996. Prevalence levels have shown little consistent change since then, with use standing at 0.4% in 2012. The question was dropped in 2013 to make room for other questions. Use also fell in the 1980s among young adults and college students, who had annual prevalence levels by 1989—the last year they were asked about this drug—of only 0.3% and 0.2%, respectively. In the late 1980s, shrinking availability may well have played a role in the decline, as legal manufacture and distribution of methaqualone ceased. Because of very low usage, only 12th graders were asked about use of this drug for some years, before it was dropped. Very few illegal drugs have declined to relatively negligible levels during the life of MTF; methaqualone, PCP, and nitrites are three examples.

- Clearly use of most of the several classes of ***psychotherapeutic drugs***—sedatives (barbiturates), tranquilizers, and narcotics other than heroin—has become a larger part of the nation's drug abuse problem. While the rise in use appears to have halted, most prevalence levels remain relatively high. During much of the 1990s and into the 2000s, we were seeing a virtually uninterrupted increase among 12th graders, college students, and young adults in the use of all of these drugs, which had fallen from favor from the mid-1970s through the early 1990s. These drugs continued to rise, even after the increase in use of most illegal drugs ended in the late 1990s and began to reverse.

- For many years, five classes of illicitly used drugs—***marijuana, amphetamines, cocaine, LSD***, and ***inhalants***—had an impact on appreciable proportions of young Americans in their late teens and 20s. In 2015, twelfth graders showed annual prevalence levels for these drugs of 34.9%, 7.7%, 2.5%, 2.9%, and 1.9%, respectively, reflecting declines in most of them, especially LSD. Among college students in 2015, the comparable annual prevalence levels were 37.9%, 9.7%, 4.3%, 3.0%, and 0.6%; for all young adults the levels were 34.0%, 7.9%, 5.7%, 2.6%, and 0.9%. Because ***LSD*** use has fallen so precipitously since 2001 in all five populations, it no longer ranks as one of the major drugs of abuse, whereas ***narcotics other than heroin*** have become quite important due to the long-term rise in use that began in the 1990s. These narcotics now have annual prevalence levels of 3–5% among 12th graders, college students, and young adults. ***Tranquilizers*** have also become more important due to a similar rise in use, with prevalence levels in 2015 of about 4–5% across the same three populations, as have ***sedatives*** (***barbiturates***), with levels of 3.6%, 2.3%, and 2.7%, respectively. The increase in use of these prescription-type drugs, combined with the decline in use of many illegal drugs, means that the misuse of prescription-type drugs clearly became a more important part of the nation's drug problem.

- Several drugs have been added to MTF's coverage over the years, including ***ketamine***, ***GHB***, and ***Rohypnol***, which are so-called "club drugs" (in addition to LSD and ecstasy). In general, these drugs have low prevalence levels that have declined over the past several years among 8th, 10th, and 12th graders. For that reason, GHB and ketamine were dropped from the 8th- and 10th-grade surveys in 2012. For 12th graders, the 2015 annual prevalence was 1.4% for ***ketamine*** and 0.7% for ***GHB***. Annual prevalence of ***Rohypnol*** was 0.3% for 8th graders, 0.2% for 10th graders, and 1.0% for 12th graders in 2015.

- ***Bath salts***, so-called because they are sold over the counter as apparently innocuous products like bath salts but really contain strong stimulants, have been given much media attention in the past few years; however, there has been very little scientific information about their prevalence. We believe that the 2012 MTF survey provided the first national survey data on their use. Fortunately, we found the annual prevalence in 2012 to be very low, at 0.8%, 0.6%, and 1.3% in grades 8, 10, and 12, respectively. In 2015 the prevalence levels are 0.4%, 0.7%, and 1.0% in the respective grades.

- Questions on use of ***Provigil*** (a prescription stay-awake drug used for narcolepsy, shift work, etc.) were added to the 12th-grade and follow-up questionnaires in 2009. In 2011 levels of Provigil use in the past year by 12th graders, college students, and young adults were 1.5%, 0.2%, and 0.3%, respectively, suggesting that this drug had not made serious inroads in terms of non-medically supervised use. Given the low use, questions on Provigil were dropped from the study in 2012.

- ***Salvia divinorum*** is a psychoactive plant that is legally available in most states; questions on salvia were added to the 12th-grade and follow-up questionnaires in 2009 and were added to the 8th- and 10th-grade questionnaires in 2010. Unlike Provigil, the annual prevalence levels of salvia were not inconsequential; in 2011, the levels were 1.6% among 8th graders, 3.9% among 10th graders, 5.9% among 12th graders, 3.1% for college students,

and 2.2% for young adults (see Table 2-2). But by 2015 levels of salvia use had declined in all five populations, suggesting that the popularity of this drug has peaked. Still, 1.9% of the 12th graders report some past-year use in 2015, but the college and young adult populations have prevalence levels at or below 0.6%.

- ***Anabolic steroid*** use occurs predominantly among males. In 2015 the annual prevalence levels for males in 8th, 10th, and 12th grades were 0.5%, 1.0%, and 2.5%, compared with 0.5%, 0.4%, and 0.7% for females. Between 1991 and 1998, the overall annual prevalence levels were fairly stable among 8th and 10th graders, ranging between 0.9% and 1.2%. In 1999, however, use jumped from 1.2% to 1.7% in both grades. Almost all of that increase occurred among males, from 1.6% in 1998 to 2.5% in 1999 in 8th grade and from 1.9% to 2.8% in 10th grade. Thus, levels among males increased by about half in a single year, which corresponded in time to stories in the news media about the use of androstenedione, a steroid precursor, by baseball home-run king Mark McGwire. Since then, among all 8th graders, anabolic steroid use has declined by more than two thirds to 0.5% in 2015. Among 10th graders, use continued to increase, reaching 2.2% in 2002, suggesting a cohort effect, but then declined by more than two thirds to 0.7% by 2015. Among 12th graders, annual prevalence rose significantly to 2.4% in 2001, but then decreased to 1.7% by 2015. Use generally has been much lower among college students and young adults, with an annual prevalence of 0.3-0.5% in 2015.

- Two other substances used primarily by males to develop physique and physical strength were added to the question set in 2001. One is ***androstenedione***, a precursor to anabolic steroids and available over the counter until early 2005. Among males, where use has tended to be more concentrated, the 2015 annual prevalence levels were 0.6%, 0.9%, and 1.0% in grades 8, 10, and 12, respectively. Among females, the levels were 0.3%, 0.3%, and 0.7%. As discussed in Chapter 10, the proportion of young males who report past-year use of ***androstenedione*** and/or ***steroids*** was appreciable. In 2001, when the "andro" question was introduced, annual prevalence for androstenedione and/or steroids was 8.0% for 12th-grade males. Prevalence has fallen considerably in all three grades since then; among 12th-grade males it was down to 2.2% in 2015.

- ***Creatine*** is another substance taken to enhance physique; it is not classified as a drug but rather as a type of protein supplement. Because we believed its use was often combined with the use of steroids and androstenedione, we introduced a question on it in 2001 and found prevalence of use to be very high. Among males, who again are the primary users, the 2015 annual prevalence for creatine was 2.1%, 11.3%, and 16.0% in grades 8, 10, and 12. In other words, nearly one in every six 12th-grade boys used creatine in the prior year. For girls, prevalence levels were far lower at 0.5%, 0.8%, and 2.1%, respectively.

- Beginning in 1982, MTF included a set of questions about the use of *nonprescription* stimulants, including stay-awake pills, diet pills, and the so-called "look-alikes" (see Chapter 10 for more detailed findings). One important finding shown in that chapter (see Table 10-3) is that the use of each of these over-the-counter substances is correlated positively with the respondent's use of illicit drugs. *In other words, there is a more general*

propensity of some youth to use or not use psychoactive substances, regardless of the drug's legal status.[8]

- The annual prevalence among 12th graders of over-the-counter ***stay-awake pills***, which usually contain caffeine as their active ingredient, more than doubled between 1982 and 1988, increasing from 12% to 26%. After 1988 this statistic fell considerably and by 2015 it was at 2.7%, the lowest level ever recorded by the survey.

- The ***look-alike stimulants*** have also shown considerable falloff since we first measured their use in 1982. Among 12th graders, annual prevalence decreased by half from 10.8% in 1982 to 5.2% in 1991. Their use rose only slightly during the relapse phase of the illicit drug epidemic in the 1990s, reaching 6.8% in 1995—roughly where it stayed through 2001. Since then the use of look-alikes decreased to 2.3% by 2015.

- Among 12th graders, annual prevalence levels for over-the-counter ***diet pills*** have fluctuated widely over the life of the study. Annual prevalence declined from 21% in 1983 to 8% a decade later, increased to 15% by 2002, then declined significantly to 4.3% by 2010, the lowest point since the questions were added in 1982. Use of this class of drugs in 2015 was up only slightly, to 5.1%. However, substantial proportions of 12th-grade girls were still using over-the-counter diet pills in 2015—12.5% had tried diet pills by the end of senior year, 8.3% used them in the past year, and 3.1% used them in just the past 30 days.

- One additional type of over-the-counter drug was added to the 8th-, 10th-, and 12th-grade questionnaires in 2006—***dextromethorphan***, a cough suppressant found in many cough and cold medications. Respondents were asked, "How often have you taken cough or cold medicines to get high?" The proportions indicating such use in the prior 12 months were 4%, 5%, and 7% in grades 8, 10, and 12 in 2006—not inconsequential proportions. In the following years prevalence declined overall, to 1.6%, 3.3%, and 4.6% in 2015.

COLLEGE/NONCOLLEGE DIFFERENCES IN ILLICIT DRUG USE

- For analytic purposes, "college students" are defined here as those respondents one to four years past high school who are actively enrolled full-time in a two- or four-year college in March of the year of the survey. For nearly all categories of illicit drugs, college students show lower levels of use than their age-mates not in college. However, for a few categories of drugs—including ***any illicit drug, marijuana,*** and ***hallucinogens***—college students show annual usage levels that are about average for all high school graduates their age. (College students are about average on the index of any illicit drug use because they have average levels of marijuana use, which largely drives the index.)

- Although college-bound 12th graders have generally had below-average levels of use on all of the ***illicit drugs*** while they were in high school, these students' eventual use of some

[8]For a more extended discussion and documentation of this point, see Johnston, L.D. (2003). Alcohol and illicit drugs: The role of risk perceptions. In Dan Romer (Ed.), Reducing adolescent risk: Toward an integrated approach (pp. 56-74). Thousand Oaks, CA: Sage. Available at http://www.monitoringthefuture.org/pubs/chapters/ldj2003.pdf.

illicit drugs attained equivalence with, or even exceeded, the levels of their age-mates who do not attend college. As MTF results have shown, this college effect of "catching up" is largely explainable in terms of differential rates of leaving the parental home after high school graduation and of getting married. College students are more likely than their age peers to have left the parental home, and they tend to defer marriage, leaving them comparatively less constrained.[9]

- In general, the substantial decline in ***illicit substance use*** among U.S. college students after 1980 paralleled that of their age peers not in college. Further, for the 12-year period 1980 to 1992, all young adult high school graduates through age 28, as well as college students taken separately, showed trends that were highly parallel, for the most part, to trends among 12th graders (see Chapter 9 of Volume II). However, after 1992 a number of drugs showed an increase in use among 12th graders (as well as 8th and 10th graders), but *not* among college students and young adults for some period of time.

 This divergence, combined with the fact that the upturn began first among 8th graders (in 1992), suggests that cohort effects were emerging for illicit drug use, as discussed earlier. Indeed, as those heavier-using cohorts of 12th graders entered the college years, we saw a lagged increase in the use of several drugs in college. For example, annual prevalence reached a low point among 12th graders in 1992 for a number of drugs (e.g., ***cocaine, amphetamines, sedatives, tranquilizers, narcotics other than heroin,*** and ***any illicit drug other than marijuana***) before rising thereafter. Among college students, those same drugs reached a low two years later in 1994, and then began to rise gradually. Then, in 1998, as ***marijuana*** use already was declining in secondary school, we saw a sharp increase in its use among college students. Consistent with our earlier predictions, the evidence for cohort effects resulting from generational replacement is quite substantial.

MALE-FEMALE DIFFERENCES IN SUBSTANCE USE

- Regarding gender differences in the three older populations (12th graders, college students, and young adults), males are more likely to use most illicit drugs, and the differences tend to be largest at the higher frequency levels. For example, 2015 ***daily marijuana*** use levels among 12th graders are more than twice as high at 8.1% for males versus 3.8% for females.

- The 8th- and 10th-grade samples evidence fewer and smaller gender differences in the use of drugs than do the older populations. While the level of past-year ***marijuana*** use is slightly higher for males, the level of use for any ***illicit drug other than marijuana*** generally has tended to be slightly higher for females. There are no appreciable gender differences in 2015 among 8th graders in their use of ***hallucinogens, LSD, MDMA, salvia, cocaine, crack, other cocaine, heroin, Vicodin, Ritalin, Adderall, methamphetamine, bath salts,*** or ***Rohypnol***. The levels of use of ***inhalants, alcohol, flavored alcoholic beverages,*** and the frequency of ***being drunk*** are slightly higher among females in 8th

[9]Bachman, J. G., Wadsworth, K. N., O'Malley, P. M., Johnston, L. D., & Schulenberg, J. E. (1997). Smoking, drinking, and drug use in young adulthood: The impacts of new freedoms and new responsibilities. Mahwah, NJ: Lawrence Erlbaum Associates. See also Bachman, J. G., O'Malley, P. M., Schulenberg, J. E., Johnston, L. D., Bryant, A. L., & Merline, A. C. (2002). The decline of substance use in young adulthood: Changes in social activities, roles, and beliefs. Mahwah, NJ: Lawrence Erlbaum Associates.

grade. By 10th grade use among boys catches up and in some cases surpasses use among girls on many of these drugs as use increases faster among boys than among girls with age.

TRENDS IN ALCOHOL USE

- Several findings about ***alcohol*** use in these age groups are noteworthy. First, despite the fact that it is illegal for virtually all secondary school students and most college students to purchase alcoholic beverages, they have had a substantial amount of experience with alcohol. Alcohol has been tried by 26% of 8th graders, 47% of 10th graders, 64% of 12th graders, 81% of college students, and 86% of young adults (19 to 28 years old). Current use (use in past 30 days) is also widespread. Most important, perhaps, is the prevalence of ***occasions of heavy drinking***, also called *binge drinking*—five or more drinks in a row at least once in the prior two-week period—which was reported by 4% of 8th graders, 11% of 10th graders, 17% of 12th graders, 32% of college students, and 32% of young adults who were surveyed in 2015.

 Alcohol use did not increase as use of other illicit drugs decreased among 12th graders from the late 1970s to the early 1990s, although it was common to hear such a "displacement hypothesis" asserted. MTF demonstrates that the opposite seems to be true. After 1980, when illicit drug use was declining, the ***monthly prevalence of alcohol use*** among 12th graders also declined gradually, but substantially, from 72% in 1980 to 51% in 1992. ***Daily alcohol use*** declined by half over the same interval, from a peak of 6.9% in 1979 to 3.4% in 1992; the prevalence of drinking ***five or more drinks in a row*** during the prior two-week interval fell from 41% in 1983 to 28% in 1993—nearly a one-third decline. When illicit drug use rose again in the 1990s, alcohol use (particularly binge drinking) rose some as well—albeit not as sharply as marijuana use. In the late 1990s, as illicit drug use leveled in secondary schools and began a gradual decline, similar trends were observed for alcohol. *Therefore, long-term evidence indicates that alcohol use moves much more in concert with illicit drug use than counter to it.* However, in recent years trends in alcohol and marijuana prevalence have begun to diverge somewhat. From 2007 through 2015 alcohol use continued its long term decline, reaching historic lows in the life of the study, including significant declines in binge drinking in 2015 for 10th and 12th graders. During this time period annual marijuana use has stayed steady or increased some for school-aged students, while it has increased for the older age groups, including a significant increase in 2015 among young adults.

College–Noncollege Differences in Alcohol Use

- Trends in ***alcohol*** use among college students are quite different than those for 12th graders or noncollege respondents of the same age as the college students (see Figure 9-14 in Volume II). From 1980 to 1993, college students showed considerably less drop-off in monthly prevalence of ***alcohol*** use (82% to 70%) than did 12th graders (72% to 51%), and also less decline in ***occasions of heavy drinking*** (from 44% to 40%) than either 12th graders (41% to 28%) or their noncollege age-mates (41% to 34%). Because both the noncollege 19- to 22-year-olds and high school students were showing greater declines, the college students stood out as having maintained a high level of episodic heavy (or binge) drinking. Since 1993, this behavior has not changed a great deal among college students—their level of binge drinking in 2015 was 32%, down modestly from their 1993 (and 2008) level of

40%. The level among noncollege age-mates was 24% in 2015 (and 30% in 2012)—down from 34% in 1993. The 12th graders' level, after increasing to 32% in 1998, dropped to 25% by 2006 where it remained through 2009; it then declined to its lowest level recorded of 17% in 2015. College students continue to stand out as having a relatively high level of binge drinking, though at 32% it is still somewhat below where it was in 1993 and 2008.

College-bound 12th graders are consistently less likely than their noncollege-bound counterparts to report occasions of heavy drinking, yet the higher levels of such drinking among college students compared to noncollege peers indicate that these 12th graders catch up to and pass their peers in binge drinking after high school graduation. As stated above, we have shown that this differential change after high school is largely attributable to the fact that college students are more likely to leave the parental home and less likely to get married in the four years after high school graduation than their age mates. An MTF journal article also shows that membership in a fraternity or sorority is associated with a greater than average increase in heavy episodic drinking and marijuana use in college.[10]

- Since 1980, college students have generally had levels of ***daily drinking*** that were slightly lower than their age peers, suggesting that they were more likely to confine their drinking to weekends, when they tend to drink a lot. The prevalence of daily drinking among the *noncollege* group fell from 8.3% in 1980 to 3.2% in 1994, rose to 5.8% by 2000, and dropped to 2.2% in 2015. Daily drinking by the *college* group also dropped in approximately the same time period, from 6.5% in 1980 to 3.0% in 1995, then increased to 5.0% in 2002; since then it has declined to 3.1% in 2015. By 2015 the two groups have similar levels of daily drinking, which is a change in a long-standing difference.

Male–Female Differences in Alcohol Use

- Given that the physiological impacts of five drinks are considerably greater for the typical young female versus the typical young male, it is not surprising that we find substantial gender differences in the prevalence of having ***five or more drinks in a row***. For example, among 12th graders, the levels of prevalence in 2015 are 15% for females versus 19% for males. This difference has generally been diminishing since MTF began; in 1975 there was a 23-percentage-point difference, versus a 4-point difference in 2015. The proportions indicating in 2015 that they have ***been drunk*** in the prior 30 days are somewhat higher at 20% and 21% for females and males, respectively.

TRENDS IN CIGARETTE SMOKING AND VAPORIZER USE

A number of very important findings about ***cigarette smoking*** among U.S. adolescents and young adults have emerged during the life of the study, and we believe that one of the study's more important contributions to the long-term health of the nation has been to document and call public attention to these trends. Despite the demonstrated health risks associated with smoking, young people have continued to establish regular cigarette habits during late adolescence in sizable proportions, and, during the first half of the 1990s, in rapidly growing proportions. Even as

[10]McCabe, S. E., Schulenberg, J. E., Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Kloska, D. D. (2005). Selection and socialization effects of fraternities and sororities on U.S. college student substance use: A multi-cohort national longitudinal study. Addiction, 100, 512–524.

cigarette smoking among adolescents reaches historic lows today, it remains at or near the top of all substances used on a daily basis.

- During most of the 1980s, when smoking levels were falling steadily among adults, we reported that smoking among adolescents was not declining. Then the situation went from bad to worse. Among 8th and 10th graders, levels of ***current*** (***past 30-day***) ***smoking*** increased by about half between 1991 (when their use was first measured) and 1996; among 12th graders, current smoking rose by nearly one third between 1992 and 1997. MTF played an important role in bringing these disturbing increases in adolescent smoking to public attention during those years, which was the historical period in which major social action was initiated in the White House, the Food & Drug Administration, the Congress, and eventually the state attorneys general, culminating in the 1998 Tobacco Master Settlement agreement between the tobacco industry and the states.

 Fortunately—and largely as a result of that settlement, we believe—there have been some important declines in current smoking since 1996 among 8th and 10th graders, and since 1997 among 12th graders. In fact, the declines have more than offset the increases observed earlier in the 1990s. In 2015, 4% of 8th graders (down from 14% in 1991 and 21% in 1996) reported smoking one or more cigarettes in the prior 30 days—a decline of 80% from the 1996 peak level. Some 6% of 10th graders were current smokers in 2015 (down from 21% in 1991 and 30% in 1996), representing a drop of nearly three quarters from the 1996 peak level. And among 2015 twelfth-grade students 11% were current smokers (versus 28% in 1991 and 37% in 1997), representing a drop of more than two thirds from the 1997 peak. Monthly prevalence of use for all three grades is now at the lowest point in the history of the study, and significantly declined in 2015 for 12th-grade students.

 Several of the important attitudinal changes that accompanied these declines in use ended some years ago (around 2007), leading us to conclude that further reductions in smoking levels will likely have to come from changes in the environment—for example, enacting such policies as tobacco tax increases, further reducing the places in which smoking is permitted, and providing effective quit-smoking programs. In 2009, federal taxes on tobacco products were in fact raised, which may well have contributed to the resumption of declines in use starting in 2011. Despite these very important improvements in the past decade and a half, about one in nine (11%) of young Americans are current smokers by the time they complete high school. Other research consistently shows that smoking levels are substantially higher among those who drop out before graduating, so the estimates here, based on high school seniors, are low for the age cohort as a whole.[11]

 Among college students, the peak level in current smoking (31%) was not reached until 1999, reflecting a cohort effect, after which it has declined to 11% in 2015, a decline of nearly two-thirds. Young adults 19 to 28 years old have also shown a decline between 2001 (30%) and 2015 (17%), a decline of four tenths.

[11]For an analysis showing much higher smoking rates among 8th graders who later dropped out before completing high school, see Bachman, J. G., O'Malley, P. M., Schulenberg, J. E., Johnston, L. D., Freedman-Doan, P., & Messersmith, E. E. (2008). The education–drug use connection: How successes and failures in school relate to adolescent smoking, drug use, and delinquency. New York: Lawrence Erlbaum Associates/Taylor & Francis. See also Table A-1 in Appendix A of this Volume.

- The dangers that survey participants perceive to be associated with ***pack-a-day smoking*** differ greatly by grade level, and seem to be unrealistically low at all grade levels. Currently, about three quarters of 12th graders (76%) think that pack-a-day smokers run a great risk of harming themselves physically or in other ways, but only 63% of the 8th graders think the same. All three grades showed a decrease in perceived risk between 1993 and 1995, as use was rising rapidly, but a slightly larger and offsetting increase in perceived risk occurred between 1995 and 2000, presaging the subsequent downturn in smoking. After 2000 there was a slight upward drift in perceived risk at all three grade levels, but it leveled off after 2004 in the lower grades and after 2006 at 12th grade. After that the upward drift resumed in all three grades. In 2015 there was no consistent change in direction across the three grades.

- *Disapproval* of cigarette smoking was in decline for a considerable period: from 1991 through 1996 among 8th and 10th graders, and from 1992 to 1996 among 12th graders. Since then there has been a fairly steady increase in disapproval of cigarette smoking in all three grades. Undoubtedly the heavy media coverage of the tobacco issue (the settlement with the states attorney general, the congressional debate, the congressional testimony of the tobacco executives, the eventual state settlements, etc.) had an important influence on these attitudes and beliefs. However, that coverage diminished considerably in 1998, raising the question of whether those changes in youth attitudes would continue. The removal of certain kinds of cigarette advertising and promotion, combined with national- and state-level antismoking campaigns and subsequent significant increases in cigarette prices, may well have served to sustain and prolong these changes. Trend data support the case for long-lasting effects, with disapproval at or near the highest levels ever recorded by the study. In 2015 the percentages disapproving of cigarette use in 8th, 10th, and 12th grades were 89%, 88%, and 84%, respectively.

Age- and Cohort-Related Differences in Cigarette Smoking

- Initiation of smoking occurs most often in grades 6 through 9 (i.e., at modal ages 11–12 to 14–15), although according to the 2015 eighth graders, 7% had already initiated smoking in grade 6 or earlier. The initiation rate trails off considerably by 12th grade, although, as we have shown in our follow-up studies, a number of the light smokers in 12th grade make the transition to heavy smoking in the first two years after high school. Analyses presented in this volume and elsewhere have shown that cigarette smoking evidences a clear cohort effect. That is, if a group of people all born around the same time (also known as a birth cohort) establishes an unusually high level of smoking at an early age relative to other cohorts, the level is likely to remain high throughout the life cycle when compared to that of other birth cohorts at equivalent ages.

- As we reported in "Other Findings from the Study" in the 1986 Volume I in this series, some 53% of 12th graders who were half-pack-a-day (or more) smokers in senior year in 1985 said that they had tried to quit smoking but could not. Of those who had been daily smokers in 12th grade, nearly three quarters were still daily smokers seven to nine years later (based on the 1985 follow-up surveys of the Class of 1985), despite the fact that in high school only 5% thought they would "definitely" be smoking five years hence. A

subsequent analysis, based on the 1995 follow-up survey, showed similar results. Nearly two thirds (63%) of those who had been daily smokers in 12th grade were still daily smokers seven to nine years later, although in high school only 3% of them had thought they would "definitely" be smoking five years hence. Clearly, the smoking habit is established at an early age, is difficult to break for those young people who have initiated use, and young people greatly overestimate their own ability to quit. Additional data from 8th- and 10th-grade students show us that younger adolescents are even more likely than older ones to seriously underestimate the dangers of smoking.

- MTF surveys of 8th and 10th graders also show that cigarettes are readily available to teens in 2015, even though perceived availability has been dropping for some years in these two grades; 47% of 8th graders and 67% of 10th graders say that cigarettes would be "fairly easy" or "very easy" for them to get, if they wanted them. Perceived availability was first asked of 8th and 10th graders in 1992; 12th graders have not been asked this question. After 1997, perceived availability of cigarettes decreased significantly for 8th and 10th graders, quite likely reflecting the impact of new regulations and related enforcement efforts aimed at reducing the sale of cigarettes to minors (including the Synar amendment, which required states to pass and enforce laws prohibiting the sale and distribution of tobacco products to persons under 18).[12]

College–Noncollege Differences in Cigarette Smoking

- A striking difference in smoking levels has long existed between college-bound and noncollege-bound 12th graders. For example, in 2015, smoking a half pack or more per day is five times as prevalent among the noncollege-bound 12th graders as among the college bound (5.5% vs. 1.1%). Among respondents of college age (one to four years past high school), those not in college also show dramatically higher levels of half-pack-a-day smoking than those who are in college—9.1% versus 1.4%, respectively. Clearly, these important differences precede college attendance.

- In the first half of the 1990s, smoking rose among college students and their same-age peers, although the increases were not as steep for either group as they were among 12th graders. But in 1998 and 1999, while smoking was declining among secondary school students at all grades, smoking continued to increase among college students and their noncollege age peers, reflecting the cohort effect from earlier, more heavily smoking classes of 12th graders moving into the older age groups. Between 1991 and 1999, the 30-day prevalence of cigarette smoking by college students rose from 23% to 31%, or by about one third, and daily smoking rose from 14% to 19%, also by about one third. The year 2000 showed, for the first time in several years, a decline in college student smoking; that continued with a significant decline to 23% in 2003, and another significant decline to 19% in 2006. The level in 2015 was 11%. (Because of the smaller numbers of cases in the college student samples, the trend lines are not always as smooth as they are for most of the other groups discussed here.) A much more modest decline has also been observed among their noncollege peers, but only since 2001; and the difference between their smoking levels and those of 12th graders in the same year have grown very large. A number

[12]For a more detailed examination of changes in youth access to cigarettes, see Johnston, L. D., O'Malley, P. M., & Terry-McElrath, Y. M. (2004). Methods, locations, and ease of cigarette access for American youth, 1997–2002. American Journal of Preventive Medicine, 27, 267–276.

of in-depth analyses of MTF panel data have revealed that the differences in smoking levels between those who do and do not attend college are evident by the end of 12th grade and have their roots in earlier educational successes and failures.[13]

Male–Female Differences in Cigarette Smoking

- In the 1970s, 12th-grade females caught up to and passed 12th-grade males in levels of ***current smoking***. Both genders then showed a decline in use followed by a long, fairly level period, with use by females consistently higher, but with the gender difference diminishing. In the early 1990s, another crossover occurred among the 12th graders when levels rose more among males than females; thereafter, males have had consistently slightly higher levels of current smoking. In the lower grades, the genders have generally had similar smoking levels since their use was first measured in 1991.

- Among college students, females had a slightly higher probability of being daily smokers from 1980 through 1994—although this long-standing gender difference was not seen among their age peers who were not in college. However, a crossover occurred between 1994 and 2001, with college males exceeding college females in daily smoking—an echo of the crossover among 12th graders in 1991. Since about 2001 there has been little consistent gender difference in smoking among college students.

Vaporizer Use

- MTF first asked about ***e-cigarette*** use in 2014 and ***vaporizer*** use in 2015, and these devices now have higher 30-day prevalence than traditional tobacco products, including regular cigarettes, among 8th, 10th, and 12th graders. Prevalence of 2015 vaporizer use is 8.0%, 14%, and 16% in these respective grades. However, not all teens vape nicotine; alternative substances include marijuana and just flavoring. A forthcoming MTF paper examines in detail what substances are consumed in vaporizers.[14] Part of the reason for the popularity of vaporizers is their low perceived risk: for the specific vaporizer device of an e-cigarette, less than 20% of students in all grades see a "great risk" in regular vaporizer use, one of the lowest levels of perceived risk measured in the survey. Among teens males are more likely to use vaporizers than females, especially at the older grades, and in all grades use is higher among students who do not plan to go to college. Vaporizers have not surpassed regular cigarette use among the older populations: about 9% of college students and young adults used vaporizers in the prior 30 days.

RACIAL/ETHNIC COMPARISONS

The three largest ethnic groups in the population—Whites, African Americans, and Hispanics—are examined here for 8th, 10th, and 12th graders. (Sample size limitations simply do not allow

[13]Bachman, J. G., Wadsworth, K. N., O'Malley, P. M., Johnston, L. D., & Schulenberg, J. E. (1997). Smoking, drinking, and drug use in young adulthood: The impacts of new freedoms and new responsibilities. Mahwah, NJ: Lawrence Erlbaum Associates. Bachman, J. G., O'Malley, P. M., Schulenberg, J. E., Johnston, L. D., Bryant, A. L., & Merline, A. C. (2002). The decline of substance use in young adulthood: Changes in social activities, roles, and beliefs. Mahwah, NJ: Lawrence Erlbaum Associates. Bachman, J. G., O'Malley, P. M., Schulenberg, J. E., Johnston, L. D., Freedman-Doan, P., & Messersmith, E. E. (2008). The education–drug use connection: How successes and failures in school relate to adolescent smoking, drinking, drug use, and delinquency. New York: Lawrence Erlbaum Associates/Taylor & Francis.

[14] Miech, R., Patrick, M. E., O'Malley, P. M., Johnston, L. D. (in press). What are kids vaping? Results from a national survey of U.S. adolescents

accurate characterization of smaller racial/ethnic groups unless data from a number of years are combined. Separate publications from the study have done just that.[15]) A number of interesting findings emerge from the comparison of these three groups; the reader is referred to Chapters 4 and 5 for a full discussion and to MTF Occasional Paper 86[16] for both tabular and graphic documentation of differences among these three ethnic groups across all drugs and trends across time.

- African-American 12th graders have consistently shown lower levels of use than White 12th graders for most drugs, both licit and illicit. At the lower grade levels, where few have yet dropped out of school, African-American students also have generally had lower levels of use for many drugs, though not all. The differences in the upper grades generally have been quite large for some drugs, including ***LSD*** specifically, ***hallucinogens other than LSD, ecstasy*** (***MDMA***), ***narcotics other than heroin, Vicodin, amphetamines, Adderall, sedatives*** (***barbiturates***), and ***tranquilizers.*** But, in 2015 African-American 8th graders have levels of use roughly equivalent to White 8th graders for a number of drugs, and for some drugs African Americans have a higher annual prevalence, ***marijuana*** in particular (12% vs. 9%).

- African-American students currently have a much lower 30-day prevalence of ***cigarette smoking*** than do White students (7% vs. 15% among 12th graders in 2015), partly because smoking among African-American students declined from 1980 to 1992, while for White students it remained fairly stable. After 1992, smoking levels rose among both White and African-American 12th graders, but less so among the latter. After 1996 (or 1998 in the case of 12th graders) smoking among White students showed a sharp and continuing decline in all three grades for some years, which considerably narrowed the smoking differences between the races, despite some decline among African Americans as well; nevertheless, there remain substantial differences. Smoking levels among Hispanic students have tended to fall in between the other two groups in the upper grades, and have tracked closely to the White smoking levels at 8th grade.

- In 12th grade, ***occasions of heavy drinking*** are much less likely to be reported by African-American students (10%) than White (21%) or Hispanic students (19%).

[15]We periodically publish comparisons that contain a number of the smaller racial/ethnic groups in the population, based on data combined for a number of contiguous years in order to attain adequate sample sizes. The first was Bachman, J. G., Wallace, J. M., Jr., O'Malley, P. M., Johnston, L. D., Kurth, C. L., & Neighbors, H. W. (1991). Racial/ethnic differences in smoking, drinking, and illicit drug use among American high school seniors, 1976–1989. *American Journal of Public Health, 81*, 372–377. More recent articles are: Bachman, J. G., O'Malley, P. M., Johnston, L. D., Schulenberg, J. E., & Wallace, J. M., Jr. (2011). Racial/ethnic differences in the relationship between parental education and substance use among U.S. 8th-, 10th-, and 12th-grade students: Findings from the Monitoring the Future Project. *Journal of Studies on Alcohol and Drugs, 72*(2), 279-285. doi: 10.1037/a0031464; Wallace, J. M., Jr., Bachman J. G., O'Malley, P. M., Johnston, L. D., Schulenberg, J. E., & Cooper, S. M. (2002). Tobacco, alcohol and illicit drug use: Racial and ethnic differences among U.S. high school seniors, 1976–2000. *Public Health Reports, 117* (Supplement 1), S67–S75; Wallace, J. M., Jr., Bachman, J. G., O'Malley, P. M., Schulenberg, J. E., Cooper, S. M., & Johnston, L. D. (2003). Gender and ethnic differences in smoking, drinking, and illicit drug use among American 8th, 10th, and 12th grade students, 1976–2000. *Addictions, 98*, 225–234; and Delva, J., Wallace, J. M., Jr., O'Malley, P. M., Bachman, J. G., Johnston, L. D., & Schulenberg, J. E. (2005). The epidemiology of alcohol, marijuana, and cocaine use among Mexican American, Puerto Rican, Cuban American, and other Latin American 8th-grade students in the United States: 1991–2002. *American Journal of Public Health, 95*, 696–702. See also Bachman, J. G., O'Malley, P. M., Johnston, L. D., & Schulenberg, J. E. (2010). *Impacts of parental education on substance use: Differences among White, African-American, and Hispanic students in 8th, 10th, and 12th grades (1999–2008)* (Monitoring the Future Occasional Paper No. 70). Ann Arbor, MI: Institute for Social Research. Available at http://www.monitoringthefuture.org/pubs/occpapers/occ70.pdf

[16]Johnston, L. D., O'Malley, P. M., Miech, R. A., Bachman, J. G., & Schulenberg, J. E. (2016). *Demographic subgroup trends among young adults in the use of various licit and illicit drugs 1975-2015* (Monitoring the Future Occasional Paper No. 86). Ann Arbor, MI: Institute for Social Research, University of Michigan. Available at http://monitoringthefuture.org/pubs/occpapers/mtf-occ86.pdf

- In 12th grade, of the three racial/ethnic groups, Whites have tended to have the highest levels of use on a number of drugs, including ***hallucinogens, hallucinogens other than LSD, salvia, narcotics other than heroin, OxyContin*** specifically***, Vicodin*** specifically***, amphetamines, Ritalin*** specifically***, Adderall*** specifically***, sedatives*** (***barbiturates***), ***tranquilizers, alcohol, getting drunk, cigarettes,*** and ***smokeless tobacco.***

- Throughout most of the study Whites typically had the highest levels of ***marijuana*** use. However, levels of use for Whites and African-Americans began to converge in the mid-2000s, when 30-day use leveled among Whites and increased among African-Americans. In 2015, 30-day prevalence was essentially the same among 12th-grade African-Americans and White students (at 21%). Levels of marijuana use for Hispanics have typically been similar to those for African-Americans, with the exception of higher levels of use in the early 1990s and early 2000s. In 2015, 30-day marijuana prevalence for 12th-grade Hispanics was 21%, the same as for African-Americans and Whites.

- Hispanics have tended to have the highest annual prevalence in 12th grade for a number of the most dangerous drugs, such as ***crack*** and ***crystal methamphetamine*** (***ice***). Whites and African-American typically have the highest level of use for ***heroin*** and ***heroin use with a needle***.

- Hispanics have the highest levels of use for many drugs in 8th grade, but not for as many in 12th; their considerably higher dropout rate (compared to Whites and African Americans) may contribute to their changed relative ranking by 12th grade.

- With regard to trends, 12th graders in all three racial/ethnic groups exhibited declines in ***cocaine*** use from 1986 through 1992, although the decline was less steep among African-American 12th graders because their earlier increase in use was not as large as the increase among White and Hispanic students.

- For virtually ***all of the illicit drugs***, the three groups have tended to trend in parallel at 12th grade. Because White 12th graders had the highest level of use on a number of drugs—including ***amphetamines***, ***sedatives*** (***barbiturates***), and ***tranquilizers***—they also have had the largest percentage declines; African Americans have had the lowest levels of use and, therefore, the smallest declines.

For a more detailed consideration of racial/ethnic differences in substance use among adolescents, see the last sections of Chapters 4 and 5.

DRUG USE IN EIGHTH GRADE

It is useful to focus specifically on the youngest age group in the study—the 8th graders, most of whom are 13 or 14 years old—in part because the worrisome levels of both licit and illicit drug use that they report help illustrate the nation's urgent need to continue to address the substance abuse problems among its youth. Further, it is a well-established fact that the earlier young people

start to use drugs, both licit and illicit, the more likely they are to experience adverse outcomes.[17,18,19]

- Among 8th graders in 2015, more than one in four (26%) report having tried ***alcohol*** (more than just a few sips), and about one in nine (11%) indicates having already been ***drunk*** at least once.

- About one eighth (13%) of all 8th graders in 2015 has tried ***cigarettes***, and one in twenty-eight (3.6%) reports having smoked in the prior month. Shocking to many adults is the fact that only 63% of 8th graders recognize that there is great risk associated with smoking one or more packs of cigarettes per day. While an increasing proportion of youth will recognize the risk by 12th grade, for many this is too late, because they will have developed a smoking habit by then.

- Among 8th grade males in 2015, 11% tried ***smokeless tobacco***, 4% used it in the past month, and 1.2% used it daily. Levels of use are much lower among females.

- One 8th grader in eleven (9%) reports ever trying ***inhalants,*** and one in 50 (2.0%) reports inhalant use in just the month prior to the 2015 survey. This is the only class of drugs for which use is substantially higher in 8th grade than in 10th or 12th grade.

- ***Marijuana*** has been tried by one in every six 8th graders (16%) and has been used in the prior month by about one in every 15 (6.5%). Some 1.1% use it on a daily or near-daily basis in 8th grade.

- A surprisingly large number of 8th graders (6.8%) say they have tried prescription-type ***amphetamines*** without medical instruction; 1.9% say they have used them in the prior 30 days.

- For most of the ***other illicit drugs***, relatively few 8th graders in 2015 say they have tried them. (This is consistent with the retrospective reports from 12th graders concerning the grades in which they first used the various drugs.) But the proportions having at least some experience with them is not inconsequential. Even prevalence as low as 3% represents about one child in every 30-student classroom, on average. The 2015 eighth-grade proportions reporting any lifetime experience with the other illicit drugs are: ***tranquilizers*** (3.0%), ***hallucinogens other than LSD*** (1.2%), ***ecstasy*** (2.3%), ***cocaine other than crack and LSD*** (both 1.3%), ***crack*** (1.0%), ***steroids*** 1.0%), ***heroin*** (0.9%), and methamphetamine and Rohypnol (0.8%).

[17]Merline, A.C., O'Malley, P.M., Schulenberg, J.E., Bachman, J.G., & Johnston, L.D. (2004). Substance use among adults 35 years of age: Prevalence, adulthood predictors, and impact of adolescent substance use. *American Journal of Public Health, 94*, 96-102.

[18]Zucker, R.A., Hicks, B.M., & Heitzeg, M.H. (2016). Alcohol use and the alcohol use disorders over the life course: A cross-level developmental review. In D. Cicchetti (Ed.) *Developmental Psychopathology, Volume 3, Maladaptation and Psychopathology*, 3rd Edition (pp 793-833). Hoboken, NJ: John Wiley & Sons.

[19]Office of the Surgeon General. (2007). *The Surgeon General's call to action to prevent and reduce underage drinking*. Rockville, MD: Department of Health and Human Services.

- In total, 25% of all 8th graders in 2015 have tried some ***illicit drug*** (including inhalants), while 10%, or one in ten, have tried ***some illicit drug other than marijuana*** or ***inhalants***. Put another way, in an average 30-student classroom of 8th graders, about eight have used some illicit drug, including inhalants; and about three have used some illicit drug other than marijuana or inhalants.

- The very large number of 8th graders who have already begun using the so-called "gateway drugs" (***tobacco, alcohol, inhalants***, and ***marijuana***) suggests that a substantial number are also at risk of proceeding further to such drugs as LSD, cocaine, amphetamines, and heroin.

SUMMARY AND CONCLUSIONS

We can summarize the findings on trends as follows: For more than a decade—from the late 1970s to the early 1990s—the use of a number of ***illicit drugs*** declined appreciably among 12th-grade students, and declined even more among American college students and young adults. These substantial improvements—which seem largely explainable in terms of changes in attitudes about drug use, beliefs about the risks of drug use, and peer norms against drug use—have some extremely important policy implications. One clear implication is that these various substance-using behaviors among American young people are malleable—they can be changed. It has been done before. The second is that demand-side (rather than supply-side) factors appear to have been pivotal in bringing about most of those changes. The levels of ***marijuana*** availability, as reported by 12th graders, have held fairly steady at high levels throughout the life of the study. (Moreover, among students who abstained from marijuana use, as well as among those who quit, availability and price rank very low on their lists of reasons for their *not* using.) And, in fact, the perceived availability of ***cocaine*** was actually rising during the beginning of the sharp decline in cocaine and crack use in the mid- to late-1980s, which occurred when the perceived risk associated with that drug rose sharply. (See the last section of Chapter 9 for more examples and further discussion of this point.)

However, improvements should not be taken for granted. Relapse is always possible; indeed, just such a relapse in the longer term epidemic occurred during the early to mid-1990s, as the country let down its guard on many fronts. (See Chapter 8 for a more detailed discussion.)

Over the years, MTF has demonstrated that changes in perceived risk and disapproval have been important causes of change in the use of a number of drugs. These beliefs and attitudes are almost certainly influenced by the amount and nature of public attention paid to the drug issue in the historical period during which young people are growing up. A substantial decline in attention to this issue in the early 1990s very likely explains why the increases in perceived risk and disapproval among students ceased and began to backslide. News coverage of the drug issue plummeted between 1989 and 1993 (although it made a considerable comeback as surveys—including MTF—began to document that the nation's drug problem was worsening again), and the media's pro *bono* placement of ads from the Partnership for a Drug-Free America also fell

considerably. (During that period, MTF 12th graders showed a steady decline in their recalled exposure to such ads, and in the judged impact of such ads on their own drug-taking behavior.[20])

Also, the deterioration in the drug abuse situation first began among our youngest cohorts—perhaps because as they were growing up they had not had the same opportunities for vicarious learning from the adverse drug experiences of people around them and people portrayed in the media—those we have called the "unfortunate role models." Clearly, there was a danger that, as the drug epidemic subsided in the 1980s and early 1990s, newer cohorts would have far less opportunity to learn through informal means about the dangers of drugs—that what we have called a generational forgetting of those risks would occur through a process of generational replacement of older, more drug-savvy cohorts with newer, naiver ones. *This suggests that as drug use subsides, as it did by the early 1990s, the nation must redouble its efforts to ensure that such naive cohorts learn these lessons about the dangers of drugs through more formal means—from schools, parents, and focused messages in the media, for example—and that this more formalized prevention effort be institutionalized so that it will endure for the long term.*

Clearly, for the foreseeable future, American young people will be aware of the psychoactive potential of a host of drugs and will continue to have access to them—a situation quite different from the one that preceded the late 1960s. (Awareness and access are two necessary conditions for an epidemic.[21]) That means that each new generation of young people must learn the reasons that they should not use drugs. Otherwise, their natural curiosity and desire for new experiences will lead a great many to use.

One lesson evident from the changes of the past decade or so is that the types of drugs most in favor can change substantially over time. The illegal drugs began to decline in use in the late 1990s, while prescription drugs, and even over-the-counter drugs, began to gain favor. Today a good many of the drugs having the highest prevalence levels among teens are of this type, including narcotic drugs other than heroin.

Unfortunately, current conditions are well suited for a second relapse phase in drug use among youth in the U.S., as indicated by the upturn in marijuana use in recent years. Perceived risk for marijuana has been falling, and recalled exposure to anti-drug ads has declined sharply in recent years.

Another lesson that derives from the MTF epidemiological data is that social influences that tend to reduce the *initiation* of substance use also have the potential to deter *continuation* by those who have already begun to use, particularly if they are not yet habitual users. Chapter 5 of *Volume I* shows how increased quitting rates have contributed importantly to downturns in the use of a number of drugs at different historical periods. The lesson is that primary prevention should not be the only goal of intervention programs; early-stage users may be persuaded to quit when their beliefs and attitudes regarding drugs are changed.

[20]Johnston, L. D. (2002, June 19). Written and oral testimony presented at hearings on the National Youth Anti-Drug Media Campaign, held by the Treasury and General Government Subcommittee on Appropriations of the U.S. Senate Appropriations Committee. Published in The Congressional Record.

[21]Johnston, LD (1991). Toward a theory of drug epidemics. In L Donohew, HE Sypher, and WJ Bukiski (Eds.), *Persuasive communication and drug abuse prevention* (pp.93-131). Hillsdale, NJ, Earlbaum. Available at www.monitoringthefuture.org/pubs/chapters/ldj1991theory.pdf

The following facts help to put into perspective the magnitude and variety of substance use problems that presently remain among young people in the US:

- A quarter (25%) of today's 8th graders have tried an ***illicit drug*** (if inhalants are included as an illicit drug), and half (51%) of 12th graders have done so.

- By their late 20s, nearly two thirds (63%) of today's young adults have tried an ***illicit drug***, and about four in ten (37%) have tried some ***illicit drug other than marijuana***, usually in addition to marijuana. (These figures do not include inhalants.)

- Today, about one in eight young adults (12% in 2015) has tried ***cocaine***, and 4.0% have tried it by their senior year of high school, when they are 17 or 18 years old. One in every 59 twelfth graders (1.7%) has tried ***crack***.

- One in every 17 twelfth graders (6.0%) in 2015 smokes ***marijuana daily***. Among young adults ages 19 to 28, the percentage is a little higher (6.8%). Also among 12th graders in 2015, one in every eight (12%) has been a daily marijuana smoker at some time for at least a month.

- About one in six 12th graders (17%) had ***five or more drinks in a row*** on at least one occasion in the two weeks prior to the survey, and we know that such behavior tends to increase among young adults one to four years past high school—that is, in the peak college years. Indeed, 37% of all male college students report such binge drinking. (The study also has documented evidence of ***extreme binge drinking*** with 6% of 12th graders in 2015 indicating having had 10 or more drinks in a row, and 3.5% indicating 15 or more drinks in a row, in the prior two weeks; see Table 5-5e.)

- Even with considerable declines in smoking among U.S. adolescents since the late 1990s, about one in nine (11%) of 12th graders in 2015 currently smoke ***cigarettes***, and one in seventeen (6%) is already a ***daily smoker***. In addition, we know from studying previous cohorts that many young adults increase their levels of smoking within a year or so after they leave high school.

 Despite the substantial improvement in this country's drug situation in the 1980s and early 1990s, and then some further improvement beginning in the late 1990s, American secondary school students and young adults show a level of involvement with ***illicit drugs*** that is among the highest in the world's industrialized nations.[22] Even by longer term historical standards in the U.S. these levels remain extremely high, though in general they are not as high as in the peak years of the epidemic in the late 1970s. ***Heavy drinking*** also

[22]A published report from an international collaborative study, modeled largely after MTF, provides comparative data from national school surveys of 15- to 16-year-olds that was completed in 2011 in 36 European countries. It also includes 2011 MTF data from 10th graders in the United States. See Hibell, B., Guttormsson, U, Ahlström, S., Balakireva, O., Bjarnasson, T., Kokkevi, A., & Kraus, L. (Eds.). (2012). The 2011 ESPAD report Substance Use among Students in 36 European countries. Stockholm: The Swedish Council for Information on Alcohol and Other Drugs, The European Monitoring Centre for Drugs and Drug Addiction, the Council of Europe Co-operation Group to Combat Drug Abuse and Illicit Trafficking in Drugs (the Pompidou Group). See also, Johnston, L. et al., "American teens are less likely than European teens to use cigarettes and alcohol, but more likely to use illicit drugs." National press release from the University of Michigan's News and Information Services, June 1, 2012. Available at http://www.ns.umich.edu/new/releases/20420-american-teens-are-less-likely-than-european-teens-to-use-cigarettes-and-alcohol-but-more-likely-to-use-illicit-drugs

remains widespread and troublesome, though it has been declining gradually over a long period and now is at or near historical lows among teens. Of course, the continuing initiation to ***cigarette smoking*** of a fair-sized, albeit decreasing proportion of young people remains a matter of great public health concern.

Vaporizers present a new challenge. MTF asked about them in 2015, and today their prevalence among young people is greater than any other tobacco product, including regular cigarettes, with 16% of 12th-grade students reporting vaporizer use in the past 30 days. No one yet knows whether vaporizers prime youth for use of regular cigarettes, a topic MTF will be able to address with its longitudinal follow-up data in future years.

After a long period of improvement, there was evidence in recent years that the use of ***smokeless tobacco*** has been on the rise among adolescents. Fortunately, this rise has begun to slow and reverse, particularly in 10th and 12th grade. The increase in the federal tobacco tax may be responsible for this slowing by helping to counter the tobacco industry's promotion of new products such as snus and dissolvable tobacco.

Of particular note, abuse of prescription drugs has declined in recent years, a welcome development after prevalence had stayed stubbornly high throughout the 2000s. Among 12th-grade students annual prevalence of ***narcotics other than heroin*** has declined for four years in a row. Annual use of ***sedatives*** among 12th graders significantly declined in 2015 to the lowest level in 20 years, and the prevalence of 3.6% is half of the 7.2% peak recorded in 2005. Annual use of ***tranquilizers*** is at or near the lowest levels since 2001 (when the question was last updated) in all grades. The update to the question on ***amphetamines*** in 2013 makes long-term trends difficult to discern, although non-significant declines in past-year use were apparent in all three grades in 2015. Perceived risk tends to be relatively low for these prescription-type drugs, which we believe is a major reason why their use had been relatively high.

- Finally, we note the seemingly unending capacity of pharmacological experts and amateurs to discover new substances with abuse potential that can be used to alter mood and consciousness (e.g., bath salts and synthetic marijuana), and of young people to discover the abuse potential of existing products (such as ***Robitussin*** and plants like ***salvia***) and to rediscover older drugs (such as ***LSD*** and ***heroin***). While as a society we have made significant progress on a number of fronts in the fight against drug abuse, we must remain vigilant against the opening of new fronts, as well as the reemergence of trouble on older ones. In particular, we must guard against generational forgetting in our newest cohorts of adolescents due to a lack of public attention to the issue during the time that they are growing up.

- One of the dynamics that keeps the drug epidemic rolling is the emergence of new drugs whose hazards are little known. In 1999 we saw this happen with the drug ecstasy (***MDMA***). Other drugs like ***Rohypnol, ketamine, GHB,*** and ***OxyContin*** appeared in the 1990s and were added to the list of drugs under study. Recently, questions on use of ***salvia, Adderall,*** and ***Provigil*** were added to the questionnaires. In 2011 we added ***synthetic marijuana***, which turned out to be the second most used illicit drug after natural marijuana,

and in 2012 we added ***bath salts***. In 2014 we added questions on ***e-cigarettes***, which we discovered have made rapid inroads among today's adolescents. The spread of such new drugs and drug devices appears to be facilitated and hastened today by young people's widespread use of web-based social networks. We expect to see a continuous flow of such new substances onto the scene, and believe that the task of rapidly documenting their emergence, establishing their adverse consequences, and quickly demystifying them will remain an important means by which policymakers, researchers, and educators deal with the continuing threats posed by such drugs. We also anticipate that there will be rediscoveries of older substances, as occurred in recent years with respect to the various psychotherapeutic prescription drugs, including ***tranquilizers, sedatives*** (***barbiturates***), and ***narcotic drugs.***

The drug problem is not an enemy that can be vanquished. It is more a recurring and relapsing problem that must be contained to the extent possible on an ongoing basis. Therefore, it is a problem that requires an ongoing, dynamic response—one that takes into account the continuing generational replacement of our children, the generational forgetting of the dangers of drugs that can occur with that replacement, and the perpetual stream of new abusable substances that will threaten to lure young people into involvement with drugs.

TABLE 2-1
Trends in Lifetime Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Any Illicit Drug [a]																										
8th Grade	18.7	20.6	22.5	25.7	28.5	31.2	29.4	29.0	28.3	26.8	26.8	24.5	22.8	21.5	21.4	20.9	19.0	19.6	19.9	21.4	20.1	18.5‡	21.1	20.3	20.5	+0.2
10th Grade	30.6	29.8	32.8	37.4	40.9	45.4	47.3	44.9	46.2	45.6	45.6	44.6	41.4	39.8	38.2	36.1	35.6	34.1	36.0	37.0	37.7	36.8‡	39.1	37.4	34.7	-2.7 s
12th Grade	44.1	40.7	42.9	45.6	48.4	50.8	54.3	54.1	54.7	54.0	53.9	53.0	51.1	51.1	50.4	48.2	46.8	47.4	46.7	48.2	49.9	49.1‡	49.8	49.1	48.9	-0.1
College Students	50.4	48.8	45.9	45.5	45.5	47.4	49.0	52.9	53.2	53.7	53.6	51.8	53.9	52.2	52.3	50.6	50.5	49.5	51.4	49.1	49.2	50.5‡	53.3	52.4	53.4	+1.0
Young Adults	62.2	60.2	59.6	57.5	57.4	56.4	56.7	57.0	57.4	58.2	58.1	59.0	60.2	60.5	60.4	59.7	59.8	59.3	59.3	58.4	59.1	58.9‡	60.0	62.2	62.9	+0.7
Any Illicit Drug other than Marijuana [a,b]																										
8th Grade	14.3	15.6	16.8	17.5	18.8	19.2	17.7	16.9	16.3	15.8‡	17.0	13.7	13.6	12.2	12.1	12.2	11.1	11.2	10.4	10.6	9.8	8.7‡	10.4	10.0	10.3	+0.3
10th Grade	19.1	19.2	20.9	21.7	24.3	25.5	25.0	23.6	24.0	23.1‡	23.6	22.1	19.7	18.8	18.0	17.5	18.2	15.9	16.7	16.8	15.6	14.9‡	16.4	15.9	14.6	-1.3
12th Grade	26.9	25.1	26.7	27.6	28.1	28.5	30.0	29.4	29.4	29.0‡	30.7	29.5	27.7	28.7	27.4	26.9	25.5	24.9	24.0	24.7	24.9	24.1‡	24.8	22.6	21.1	-1.5
College Students	25.8	26.1	24.3	22.0	24.5	22.7	24.4	24.8	25.5	25.8‡	26.3	26.9	27.6	28.0	26.5	26.3	25.3	22.6	25.6	24.8	24.3	23.8‡	28.3	29.0	26.4	-2.5
Young Adults	37.8	37.0	34.6	33.4	32.8	31.0	30.5	29.9	30.2	31.3‡	31.6	32.8	33.9	35.2	34.0	34.8	34.2	34.7	32.8	33.3	33.2	32.8‡	34.0	37.3	36.8	-0.5
Any Illicit Drug including Inhalants [a,c,d]																										
8th Grade	28.5	29.6	32.3	35.1	38.1	39.4	38.1	37.8	37.2	35.1	34.5	31.6	30.3	30.2	30.0	29.2	27.7	28.3	27.9	28.6	26.4	40.0‡	25.9	25.2	24.9	-0.4
10th Grade	36.1	36.2	38.7	42.7	45.9	49.8	50.9	49.3	49.9	49.3	48.8	47.7	44.9	43.1	42.1	40.1	39.8	38.7	40.0	40.6	40.8	25.1‡	41.6	40.4	37.2	-3.2 s
12th Grade	47.6	44.4	46.6	49.1	51.5	53.5	56.3	56.1	56.3	57.0	56.0	54.6	52.8	53.0	53.5	51.2	49.1	49.3	48.4	49.9	51.8	50.3‡	52.3	49.9	51.4	+1.5
College Students	52.0	50.3	49.1	47.0	47.0	49.1	50.7	55.4	54.4	54.6	53.1	52.3	54.1	52.9	53.9	53.3	52.5	51.0	51.1	50.0	49.7	52.0‡	53.3	51.8	52.0	+0.3
Young Adults	63.4	61.2	61.2	58.5	59.0	58.2	58.4	58.5	58.5	59.5	59.0	59.6	60.6	62.5	61.4	61.2	61.2	60.2	59.3	59.3	59.5	59.5‡	62.2	60.6	61.0	+0.4
Marijuana/Hashish																										
8th Grade	10.2	11.2	12.6	16.7	19.9	23.1	22.6	22.2	22.0	20.3	20.4	19.2	17.5	16.3	16.5	15.7	14.2	14.6	15.7	17.3	16.4	15.2	16.5	15.6	15.5	-0.1
10th Grade	23.4	21.4	24.4	30.4	34.1	39.8	42.3	39.6	40.9	40.3	40.1	38.7	36.4	35.1	34.1	31.8	31.0	29.9	32.3	33.4	34.5	33.8	35.8	33.7	31.1	-2.6 s
12th Grade	36.7	32.6	35.3	38.2	41.7	44.9	49.6	49.1	49.7	48.8	49.0	47.8	46.1	45.7	44.8	42.3	41.8	42.6	42.0	43.8	45.5	45.2	45.5	44.4	44.7	+0.3
College Students	46.3	44.1	42.0	42.2	41.7	45.1	46.1	49.9	50.8	51.2	51.0	49.5	50.7	49.1	49.1	46.9	47.5	46.8	47.5	46.8	46.6	49.1	47.7	48.5	50.4	+1.9
Young Adults	58.6	56.4	55.9	53.7	53.6	53.4	53.8	54.4	54.6	55.1	55.7	56.8	57.2	57.4	57.0	56.7	56.7	55.9	56.0	55.9	56.3	56.5	57.1	57.5	58.5	+1.0
Inhalants [c,d]																										
8th Grade	17.6	17.4	19.4	19.9	21.6	21.2	21.0	20.5	19.7	17.9	17.1	15.2	15.8	17.3	17.1	16.1	15.6	15.7	14.9	14.5	13.1	11.8	10.8	10.8	9.4	-1.4 s
10th Grade	15.7	16.6	17.5	18.0	19.0	19.3	18.3	18.3	17.0	16.6	15.2	13.5	12.7	12.4	13.1	13.3	13.6	12.8	12.3	12.0	10.1	9.9	8.7	8.7	7.2	-1.5 ss
12th Grade	17.6	16.6	17.4	17.7	17.4	16.6	16.1	15.2	15.4	14.2	13.0	11.7	11.2	10.9	11.4	11.1	10.5	9.9	9.5	9.0	8.1	7.9	6.9	6.5	5.7	-0.8
College Students	14.4	14.2	14.8	12.0	13.8	11.4	12.4	12.8	12.4	12.9	9.6	7.7	9.7	8.5	7.1	7.4	6.3	4.9	6.9	5.5	3.7	5.7	4.3	3.5	3.1	-0.4
Young Adults	13.4	13.5	14.1	13.2	14.5	14.1	14.1	14.2	14.2	14.3	12.8	12.4	12.2	11.6	10.3	10.9	9.1	9.5	8.9	7.9	7.2	7.2	6.5	6.7	6.4	-0.3

(Table continued on next page.)

TABLE 2-1 (cont.)
Trends in Lifetime Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Hallucinogens [b,f]																										
8th Grade	3.2	3.8	3.9	4.3	5.2	5.9	5.4	4.9	4.8	4.6‡	5.2	4.1	4.0	3.5	3.8	3.4	3.1	3.3	3.0	3.4	3.3	2.8	2.5	2.0	2.0	0.0
10th Grade	6.1	6.4	6.8	8.1	9.3	10.5	10.5	9.8	9.7	8.9‡	8.9	7.8	6.9	6.4	5.8	6.1	6.4	5.5	6.1	6.1	6.0	5.2	5.4	5.0	4.6	-0.4
12th Grade	9.6	9.2	10.9	11.4	12.7	14.0	15.1	14.1	13.7	13.0‡	14.7	12.0	10.6	9.7	8.8	8.3	8.4	8.7	7.4	8.6	8.3	7.5	7.6	6.3	6.4	0.0
College Students	11.3	12.0	11.8	10.0	13.0	12.6	13.8	15.2	14.8	14.4‡	14.8	13.6	14.5	12.0	11.0	10.6	9.1	8.5	8.0	7.8	7.4	7.6	7.8	7.6	6.5	-1.1
Young Adults	15.7	15.7	15.4	15.4	16.1	16.4	16.8	17.4	18.0	18.4‡	18.3	19.6	19.7	19.3	17.6	17.2	16.0	14.8	14.2	13.9	13.0	12.2	12.4	11.9	11.7	-0.3
LSD [b]																										
8th Grade	2.7	3.2	3.5	3.7	4.4	5.1	4.7	4.1	4.1	3.9	3.4	2.5	2.1	1.8	1.9	1.6	1.6	1.9	1.7	1.8	1.7	1.3	1.4	1.1	1.3	+0.2
10th Grade	5.6	5.8	6.2	7.2	8.4	9.4	9.5	8.5	8.5	7.6	6.3	5.0	3.5	2.8	2.5	2.7	3.0	2.6	3.0	3.0	2.8	2.6	2.7	2.6	3.0	+0.4
12th Grade	8.8	8.6	10.3	10.5	11.7	12.6	13.6	12.6	12.2	11.1	10.9	8.4	5.9	4.6	3.5	3.3	3.4	4.0	3.1	4.0	4.0	3.8	3.9	3.7	4.3	+0.6
College Students	9.6	10.6	10.6	9.2	11.5	10.8	11.7	13.1	12.7	11.8	12.2	8.6	8.7	5.6	3.7	3.5	3.3	4.3	3.3	4.0	3.7	3.1	4.4	4.5	4.8	+0.3
Young Adults	13.5	13.8	13.6	13.8	14.5	15.0	15.0	15.7	16.2	16.4	16.0	15.1	14.6	13.4	11.2	10.1	9.6	8.1	7.3	7.2	6.1	6.2	6.3	6.6	7.0	+0.4
Hallucinogens other than LSD [b]																										
8th Grade	1.4	1.7	1.7	2.2	2.5	3.0	2.6	2.5	2.4	2.3‡	3.9	3.3	3.2	3.0	3.3	2.8	2.6	2.5	2.4	2.7	2.8	2.3	1.9	1.5	1.2	-0.3
10th Grade	2.2	2.5	2.8	3.8	3.9	4.7	4.8	5.0	4.7	4.8‡	6.6	6.3	5.9	5.8	5.2	5.5	5.7	4.8	5.4	5.3	5.2	4.5	4.4	4.1	3.3	-0.7 s
12th Grade	3.7	3.3	3.9	4.9	5.4	6.8	7.5	7.1	6.7	6.9‡	10.4	9.2	9.0	8.7	8.1	7.8	7.7	7.8	6.8	7.7	7.3	6.6	6.4	5.1	4.8	-0.3
College Students	6.0	5.7	5.4	4.4	6.5	6.5	7.5	8.7	8.8	8.2‡	10.7	11.0	12.8	10.1	10.6	10.1	8.5	8.2	7.8	7.1	6.9	7.2	6.8	6.8	5.1	-1.7
Young Adults	8.4	8.0	7.6	7.4	7.8	7.9	8.5	9.4	9.3	9.9‡	12.0	15.0	16.4	15.6	15.4	14.9	14.1	13.0	13.0	12.6	12.1	11.1	11.4	10.8	10.4	-0.4
PCP [g]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	2.9	2.4	2.9	2.8	2.7	4.0	3.9	3.9	3.4	3.4	3.5	3.1	2.5	1.6	2.4	2.2	2.1	1.8	1.7	1.8	2.3	1.6	1.3	—	—	—
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	3.1	2.0	1.9	2.0	2.2	1.9	2.4	2.7	2.3	2.3	3.1	2.5	3.0	2.7	2.0	2.4	2.1	2.2	1.6	1.6	1.7	1.1	1.4	0.6	1.2	+0.6
Ecstasy (MDMA) [h]																										
8th Grade, original	—	—	—	—	—	3.4	3.2	2.7	2.7	4.3	5.2	4.3	3.2	2.8	2.8	2.5	2.3	2.4	2.2	3.3	2.6	2.0	1.8	1.4	—	—
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.4	2.3	-0.1
10th Grade, original	—	—	—	—	—	5.6	5.7	5.1	6.0	7.3	8.0	6.6	5.4	4.3	4.0	4.5	5.2	4.3	5.5	6.4	6.6	5.0	5.7	3.7	—	—
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.2	3.8	-1.4 s
12th Grade, original	—	—	—	—	—	6.1	6.9	5.8	8.0	11.0	11.7	10.5	8.3	7.5	5.4	6.5	6.5	6.2	6.5	7.3	8.0	7.2	7.1	5.6	—	—
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.9	5.9	-2.0 s
College Students																										
Original	2.0	2.9	2.3	2.1	3.1	4.3	4.7	6.8	8.4	13.1	14.7	12.7	12.9	10.2	8.3	6.9	5.4	6.2	6.5	6.2	6.8	8.7	8.1	8.2	—	—
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.1	8.9	+0.7
Young Adults																										
Original	3.2	3.9	3.8	3.8	4.5	5.2	5.1	7.2	7.1	11.6	13.0	14.6	15.3	16.0	14.9	14.4	13.1	13.1	11.5	12.3	11.3	11.4	11.6	11.4	—	—
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12.5	12.9	+0.4

(Table continued on next page.)

TABLE 2-1 (cont.)
Trends in Lifetime Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change	
Cocaine																											
8th Grade	2.3	2.9	2.9	3.6	4.2	4.5	4.4	4.6	4.7	4.5	4.3	3.6	3.6	3.4	3.7	3.4	3.1	3.0	2.6	2.6	2.2	1.9	1.7	1.8	1.6	-0.2	
10th Grade	4.1	3.3	3.6	4.3	5.0	6.5	7.1	7.2	7.7	6.9	5.7	6.1	5.1	5.4	5.2	4.8	5.3	4.5	4.6	3.7	3.3	3.3	3.3	2.6	2.7	+0.1	
12th Grade	7.8	6.1	6.1	5.9	6.0	7.1	8.7	9.3	9.8	8.6	8.2	7.8	7.7	8.1	8.0	8.5	7.8	7.2	6.0	5.5	5.2	4.9	4.5	4.6	4.0	-0.5	
College Students	9.4	7.9	6.3	5.0	5.5	5.0	5.6	8.1	8.4	9.1	8.6	8.2	9.2	9.5	8.8	7.7	8.5	7.2	8.1	6.6	5.5	5.2	5.1	6.2	6.1	-0.1	
Young Adults	21.0	19.5	16.9	15.2	13.7	12.9	12.1	12.3	12.8	12.7	13.1	13.5	14.7	15.2	14.3	15.2	14.7	14.8	13.9	13.6	12.5	11.9	12.2	11.7	12.1	+0.4	
Crack [i]																											
8th Grade	1.3	1.6	1.7	2.4	2.7	2.9	2.7	3.2	3.1	3.1	3.0	2.5	2.5	2.4	2.4	2.3	2.1	2.0	1.7	1.5	1.5	1.0	1.2	1.2	1.0	-0.3	
10th Grade	1.7	1.5	1.8	2.1	2.8	3.3	3.6	3.9	4.0	3.7	3.1	3.6	2.7	2.6	2.5	2.2	2.3	2.0	2.1	1.8	1.6	1.4	1.5	1.0	1.1	+0.1	
12th Grade	3.1	2.6	2.6	3.0	3.0	3.3	3.9	4.4	4.6	3.9	3.7	3.8	3.6	3.9	3.5	3.5	3.2	2.8	2.4	2.4	1.9	2.1	1.8	1.8	1.7	0.0	
College Students	1.5	1.7	1.3	1.0	1.8	1.2	1.4	2.2	2.4	2.5	2.0	1.9	3.1	2.0	1.7	2.3	1.3	1.4	1.0	1.2	0.8	0.7	0.7	1.4	0.5	-0.9	
Young Adults	4.8	5.1	4.3	4.4	3.8	3.9	3.6	3.8	4.3	4.6	4.7	4.3	4.7	4.2	4.1	4.4	3.9	4.3	3.3	3.6	2.9	2.7	2.6	2.1	1.8	-0.3	
Other Cocaine [j]																											
8th Grade	2.0	2.4	2.4	3.0	3.4	3.8	3.5	3.7	3.8	3.5	3.3	2.8	2.7	2.6	2.9	2.7	2.6	2.4	2.1	2.1	1.8	1.6	1.4	1.4	1.3	-0.1	
10th Grade	3.8	3.0	3.3	3.8	4.4	5.5	6.1	6.4	6.8	6.0	5.0	5.2	4.5	4.8	4.6	4.3	4.8	4.0	4.1	3.4	3.0	3.0	2.9	2.2	2.3	+0.1	
12th Grade	7.0	5.3	5.4	5.2	5.1	6.4	8.2	8.4	8.8	7.7	7.4	7.0	6.7	7.3	7.1	7.9	6.8	6.5	5.3	5.1	4.9	4.4	4.2	4.1	3.4	-0.7	
College Students	9.0	7.6	6.3	4.6	5.2	4.6	5.0	7.4	7.8	8.1	8.3	8.6	8.5	9.3	8.1	6.2	8.0	7.1	7.9	6.7	5.4	5.1	5.2	6.2	6.4	+0.2	
Young Adults	19.8	18.4	15.1	13.9	12.4	11.9	11.3	11.5	11.8	11.7	12.1	12.8	13.5	14.4	13.3	14.4	14.0	13.9	13.5	13.1	12.2	11.8	11.8	11.6	11.8	+0.3	
Heroin [k,l]																											
8th Grade	1.2	1.4	1.4	2.0	2.3	2.4	2.1	2.3	2.3	1.9	1.7	1.6	1.6	1.6	1.5	1.4	1.3	1.4	1.3	1.3	1.2	0.8	1.0	0.9	0.5	-0.5	sss
10th Grade	1.2	1.2	1.3	1.5	1.7	2.1	2.1	2.3	2.3	2.2	1.7	1.8	1.5	1.5	1.5	1.4	1.5	1.2	1.5	1.3	1.2	1.1	1.0	0.9	0.7	-0.2	
12th Grade	0.9	1.2	1.1	1.2	1.6	1.8	2.1	2.0	2.0	2.4	1.8	1.7	1.5	1.5	1.5	1.4	1.5	1.3	1.2	1.6	1.4	1.1	1.0	1.0	0.8	-0.2	
College Students	0.5	0.5	0.6	0.1	0.6	0.7	0.9	1.7	0.9	1.7	1.2	1.0	1.0	0.9	0.5	0.7	0.5	0.7	0.8	0.7	0.6	0.5	0.4	0.3	0.2	-0.1	
Young Adults	0.9	0.9	0.9	0.8	1.1	1.3	1.3	1.6	1.7	1.8	2.0	1.8	1.9	1.9	1.7	1.9	1.6	1.9	1.6	1.8	1.7	1.6	1.6	1.4	1.6	+0.1	
With a Needle [l]																											
8th Grade	—	—	—	—	1.5	1.6	1.3	1.4	1.6	1.1	1.2	1.0	1.0	1.1	1.0	1.0	0.9	0.9	0.9	0.9	0.8	0.6	0.6	0.8	0.3	-0.5	sss
10th Grade	—	—	—	—	1.0	1.1	1.1	1.2	1.3	1.0	0.8	1.0	0.9	0.8	0.8	0.9	0.9	0.7	0.9	0.8	0.8	0.7	0.7	0.6	0.5	-0.1	
12th Grade	—	—	—	—	0.7	0.8	0.9	0.8	0.9	0.8	0.7	0.8	0.7	0.7	0.9	0.8	0.7	0.7	0.6	1.1	0.9	0.7	0.7	0.8	0.6	-0.2	
College Students	—	—	—	—	0.4	0.1	0.2	0.5	0.8	0.7	0.2	0.3	0.1	0.1	0.3	0.3	0.1	0.0	0.1	0.1	0.3	0.2	0.1	0.0	0.3	+0.3	
Young Adults	—	—	—	—	0.4	0.4	0.3	0.4	0.6	0.4	0.6	0.4	0.5	0.4	0.6	0.6	0.5	0.5	0.5	0.8	0.7	0.5	1.0	0.7	0.7	0.0	
Without a Needle [l]																											
8th Grade	—	—	—	—	1.5	1.6	1.4	1.5	1.4	1.3	1.1	1.0	1.1	1.0	0.9	0.9	0.7	0.9	0.8	0.7	0.7	0.5	0.5	0.4	0.3	-0.1	
10th Grade	—	—	—	—	1.1	1.7	1.7	1.7	1.6	1.7	1.3	1.3	1.0	1.1	1.1	1.0	1.1	0.8	1.0	0.9	0.8	0.8	0.7	0.5	0.4	-0.1	
12th Grade	—	—	—	—	1.4	1.7	2.1	1.6	1.8	2.4	1.5	1.6	1.8	1.4	1.3	1.1	1.4	1.1	0.9	1.4	1.3	0.8	0.9	0.7	0.7	0.0	
College Students	—	—	—	—	0.5	1.0	1.2	2.1	1.0	2.5	1.3	1.2	1.1	1.0	0.3	0.8	0.4	0.7	0.4	0.4	0.4	0.5	0.8	0.1	0.4	+0.3	
Young Adults	—	—	—	—	0.9	1.3	1.5	1.7	1.9	2.1	2.1	1.8	2.2	2.1	1.8	2.4	1.9	2.1	1.9	1.8	1.6	1.7	1.8	1.2	1.8	+0.6	

(Table continued on next page.)

TABLE 2-1 (cont.)
Trends in Lifetime Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Narcotics other than Heroin [m,n]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	6.6	6.1	6.4	6.6	7.2	8.2	9.7	9.8	10.2	10.6	9.9‡	13.5	13.2	13.5	12.8	13.4	13.1	13.2	13.2	13.0	13.0	12.2	11.1	9.5	8.4	-1.0 s
College Students	7.3	7.3	6.2	5.1	7.2	5.7	8.2	8.7	8.7	8.9	11.0‡	12.2	14.2	13.8	14.4	14.6	14.1	12.4	14.0	12.2	12.4	10.3	10.8	9.9	6.6	-3.3 ss
Young Adults	9.3	8.9	8.1	8.2	9.0	8.3	9.2	9.1	9.5	10.0	11.5‡	13.9	16.8	17.6	17.8	18.7	18.8	19.5	18.5	19.0	18.2	17.6	17.4	16.3	15.0	-1.3
Amphetamines [m,o]																										
8th Grade	10.5	10.8	11.8	12.3	13.1	13.5	12.3	11.3	10.7	9.9	10.2	8.7	8.4	7.5	7.4	7.3	6.5	6.8	6.0	5.7	5.2	4.5‡	6.9	6.7	6.8	+0.1
10th Grade	13.2	13.1	14.9	15.1	17.4	17.7	17.0	16.0	15.7	15.7	16.0	14.9	13.1	11.9	11.1	11.2	11.1	9.0	10.3	10.6	9.0	8.9‡	11.2	10.6	9.7	-0.9
12th Grade	15.4	13.9	15.1	15.7	15.3	15.3	16.5	16.4	16.3	15.6	16.2	16.8	14.4	15.0	13.1	12.4	11.4	10.5	9.9	11.1	12.2	12.0‡	13.8	12.1	10.8	-1.2
College Students	13.0	10.5	10.1	9.2	10.7	9.5	10.6	10.6	11.9	12.3	12.4	11.9	12.3	12.7	12.3	10.7	11.2	9.1	11.8	12.1	13.4	14.4‡	16.1	15.0	13.9	-1.0
Young Adults	22.4	20.2	18.7	17.1	16.6	15.3	14.6	14.3	14.1	15.0	15.0	14.8	15.2	15.9	14.6	15.6	15.3	14.6	14.9	16.1	16.5	17.4‡	18.8	18.7	18.8	+0.2
Methamphetamine [p,q]																										
8th Grade	—	—	—	—	—	—	—	—	4.5	4.2	4.4	3.5	3.9	2.5	3.1	2.7	1.8	2.3	1.6	1.8	1.3	1.3	1.4	1.0	0.8	-0.2
10th Grade	—	—	—	—	—	—	—	—	7.3	6.9	6.4	6.1	5.2	5.3	4.1	3.2	2.8	2.4	2.8	2.5	2.1	1.8	1.6	1.4	1.3	-0.1
12th Grade	—	—	—	—	—	—	—	—	8.2	7.9	6.9	6.7	6.2	6.2	4.5	4.4	3.0	2.8	2.4	2.3	2.1	1.7	1.5	1.9	1.0	-0.9 ss
College Students	—	—	—	—	—	—	—	—	7.1	5.1	5.3	5.0	5.8	5.2	4.1	2.9	1.9	1.9	1.0	1.1	0.6	0.3	0.9	0.7	0.8	+0.1
Young Adults	—	—	—	—	—	—	—	—	8.8	9.3	9.0	9.1	8.9	9.0	8.3	7.3	6.7	6.3	4.7	4.3	3.2	3.5	3.1	2.3	2.4	+0.1
Crystal Methamphetamine (Ice) [q]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	3.3	2.9	3.1	3.4	3.9	4.4	4.4	5.3	4.8	4.0	4.1	4.7	3.9	4.0	4.0	3.4	3.4	2.8	2.1	1.8	2.1	1.7	2.0	1.3	1.2	-0.1
College Students	1.3	0.6	1.6	1.3	1.0	0.8	1.6	2.2	2.8	1.3	2.3	2.0	2.9	2.2	2.4	1.7	1.3	1.1	0.7	0.8	0.2	0.6	0.0	0.3	0.3	0.0
Young Adults	2.9	2.2	2.7	2.5	2.1	3.1	2.5	3.4	3.3	3.9	4.0	4.1	4.7	4.7	4.4	4.7	3.7	3.6	3.4	2.8	3.1	2.6	2.8	1.7	2.2	+0.5
Sedatives (Barbiturates) [m,r]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	6.2	5.5	6.3	7.0	7.4	7.6	8.1	8.7	8.9	9.2	8.7	9.5	8.8‡	9.9	10.5	10.2	9.3	8.5	8.2	7.5	7.0	6.9	7.5	6.8	5.9	-1.0 s
College Students	3.5	3.8	3.5	3.2	4.0	4.6	5.2	5.7	6.7	6.9	6.0	5.9	5.7	7.2	8.5	6.3	5.9	6.4	6.0	5.3	3.6	3.5‡	5.4	5.9	4.4	-1.5
Young Adults	8.2	7.4	6.5	6.4	6.7	6.6	6.5	6.9	7.4	8.1	7.8	8.0	8.7	9.7	10.0	9.5	9.8	10.6	9.5	8.6	7.9	7.2‡	9.5	9.0	8.3	-0.7

(Table continued on next page.)

TABLE 2-1 (cont.)
Trends in Lifetime Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Tranquilizers [b,m]																										
8th Grade	3.8	4.1	4.4	4.6	4.5	5.3	4.8	4.6	4.4	4.4‡	5.0	4.3	4.4	4.0	4.1	4.3	3.9	3.9	3.9	4.4	3.4	3.0	2.9	2.9	3.0	+0.1
10th Grade	5.8	5.9	5.7	5.4	6.0	7.1	7.3	7.8	7.9	8.0‡	9.2	8.8	7.8	7.3	7.1	7.2	7.4	6.8	7.0	7.3	6.8	6.3	5.5	5.8	5.8	0.0
12th Grade	7.2	6.0	6.4	6.6	7.1	7.2	7.8	8.5	9.3	8.9‡	10.3	11.4	10.2	10.6	9.9	10.3	9.5	8.9	9.3	8.5	8.7	8.5	7.7	7.4	6.9	-0.5
College Students	6.8	6.9	6.3	4.4	5.4	5.3	6.9	7.7	8.2	8.8‡	9.7	10.7	11.0	10.6	11.9	10.0	9.1	8.6	9.2	8.1	7.1	6.4	7.8	6.9	7.8	+0.9
Young Adults	11.8	11.3	10.5	9.9	9.7	9.3	8.6	9.6	9.6	10.5‡	11.9	13.4	13.8	14.9	14.5	15.0	14.5	15.8	13.8	14.3	13.8	13.3	13.2	12.5	12.8	+0.2
Any Prescription Drug [o,t]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	24.0	23.9	22.2	21.5	20.9	21.6	21.7	21.2‡	22.2	19.9	18.3	-1.6
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rohypnol [u]																										
8th Grade	—	—	—	—	—	1.5	1.1	1.4	1.3	1.0	1.1	0.8	1.0	1.0	1.1	1.0	1.0	0.7	0.7	0.9	2.0	1.0	0.7	0.6	0.8	+0.2
10th Grade	—	—	—	—	—	1.5	1.7	2.0	1.8	1.3	1.5	1.3	1.0	1.2	1.0	0.8	1.3	0.9	0.7	1.4	1.2	0.8	1.1	1.0	0.5	-0.5
12th Grade	—	—	—	—	—	1.2	1.8	3.0	2.0	1.5	1.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Alcohol [v]																										
Any Use																										
8th Grade	70.1	69.3‡	55.7	55.8	54.5	55.3	53.8	52.5	52.1	51.7	50.5	47.0	45.6	43.9	41.0	40.5	38.9	38.9	36.6	35.8	33.1	29.5	27.8	26.8	26.1	-0.7
10th Grade	83.8	82.3‡	71.6	71.1	70.5	71.8	72.0	69.8	70.6	71.4	70.1	66.9	66.0	64.2	63.2	61.5	61.7	58.3	59.1	58.2	56.0	54.0	52.1	49.3	47.1	-2.2
12th Grade	88.0	87.5‡	80.0	80.4	80.7	79.2	81.7	81.4	80.0	80.3	79.7	78.4	76.6	76.8	75.1	72.7	72.2	71.9	72.3	71.0	70.0	69.4	68.2	66.0	64.0	-2.0
College Students	93.6	91.8	89.3	88.2	88.5	88.4	87.3	88.5	88.0	86.6	86.1	86.0	86.2	84.6	86.6	84.7	83.1	85.3	82.6	82.3	80.5	81.0	78.0	79.4	81.4	+2.0
Young Adults	94.1	93.4	92.1	91.2	91.6	91.2	90.7	90.6	90.2	90.7	89.9	90.2	89.3	89.4	89.1	88.9	87.9	88.4	87.9	87.5	87.4	86.5	86.2	86.3	85.7	-0.7
Been Drunk [w]																										
8th Grade	26.7	26.8	26.4	25.9	25.3	26.8	25.2	24.8	24.8	25.1	23.4	21.3	20.3	19.9	19.5	19.5	17.9	18.0	17.4	16.3	14.8	12.8	12.2	10.8	10.9	+0.1
10th Grade	50.0	47.7	47.9	47.2	46.9	48.5	49.4	46.7	48.9	49.3	48.2	44.0	42.4	42.3	42.1	41.4	41.2	37.2	38.6	36.9	35.9	34.6	33.5	30.2	28.6	-1.6
12th Grade	65.4	63.4	62.5	62.9	63.2	61.8	64.2	62.4	62.3	62.3	63.9	61.6	58.1	60.3	57.5	56.4	55.1	54.7	56.5	54.1	51.0	54.2	52.3	49.8	46.7	-3.1
College Students	79.6	76.8	76.4	74.4	76.6	76.2	77.0	76.8	75.1	74.7	76.1	75.1	74.9	73.4	72.9	73.1	71.6	72.5	69.1	70.5	67.9	70.0	66.5	68.8	68.6	-0.3
Young Adults	82.9	81.1	81.4	80.7	82.1	80.7	81.4	79.8	81.6	80.4	81.1	81.2	80.9	80.1	79.9	80.9	80.1	80.1	78.2	79.0	78.9	78.9	77.4	78.3	76.4	-1.9

(Table continued on next page.)

TABLE 2-1 (cont.)
Trends in Lifetime Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Flavored Alcoholic Beverages [g,p]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	37.9	35.5	35.5	34.0	32.8	29.4	30.0	27.0	23.5	21.9	19.2	19.3	+0.1
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	58.6	58.8	58.1	55.7	53.5	51.4	51.3	48.4	46.7	44.9	42.3	38.7	-3.6 s
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	71.0	73.6	69.9	68.4	65.5	67.4	62.6	62.4	60.5	58.9	57.5	55.6	-2.0
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	79.0	84.5	80.9	80.6	78.6	78.1	77.4	76.7	76.6	67.5	72.7	74.8	+2.1
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	83.2	84.6	84.4	84.0	82.6	83.5	81.4	82.2	82.4	80.9	80.6	81.0	+0.5
Cigarettes																										
Any Use																										
8th Grade	44.0	45.2	45.3	46.1	46.4	49.2	47.3	45.7	44.1	40.5	36.6	31.4	28.4	27.9	25.9	24.6	22.1	20.5	20.1	20.0	18.4	15.5	14.8	13.5	13.3	-0.2
10th Grade	55.1	53.5	56.3	56.9	57.6	61.2	60.2	57.7	57.6	55.1	52.8	47.4	43.0	40.7	38.9	36.1	34.6	31.7	32.7	33.0	30.4	27.7	25.7	22.6	19.9	-2.6 s
12th Grade	63.1	61.8	61.9	62.0	64.2	63.5	65.4	65.3	64.6	62.5	61.0	57.2	53.7	52.8	50.0	47.1	46.2	44.7	43.6	42.2	40.0	39.5	38.1	34.4	31.1	-3.3 ss
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Smokeless Tobacco [x]																										
8th Grade	22.2	20.7	18.7	19.9	20.0	20.4	16.8	15.0	14.4	12.8	11.7	11.2	11.3	11.0	10.1	10.2	9.1	9.8	9.6	9.9	9.7	8.1	7.9	8.0	8.6	+0.6
10th Grade	28.2	26.6	28.1	29.2	27.6	27.4	26.3	22.7	20.4	19.1	19.5	16.9	14.6	13.8	14.5	15.0	15.1	12.2	15.2	16.8	15.6	15.4	14.0	13.6	12.3	-1.2
12th Grade	—	32.4	31.0	30.7	30.9	29.8	25.3	26.2	23.4	23.1	19.7	18.3	17.0	16.7	17.5	15.2	15.1	15.6	16.3	17.6	16.9	17.4	17.2	15.1	13.2	-1.9
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Electronic Vaporizers [jj]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	21.7	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	32.8	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	35.5	—
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	26.0	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30.3	—
Steroids [y,z]																										
8th Grade	1.9	1.7	1.6	2.0	2.0	1.8	1.8	2.3	2.7	3.0	2.8	2.5	2.5	1.9	1.7	1.6	1.5	1.4	1.3	1.1	1.2	1.2	1.1	1.0	1.0	0.0
10th Grade	1.8	1.7	1.7	1.8	2.0	1.8	2.0	2.0	2.7	3.5	3.5	3.5	3.0	2.4	2.0	1.8	1.8	1.4	1.3	1.6	1.4	1.3	1.3	1.4	1.2	-0.2
12th Grade	2.1	2.1	2.0	2.4	2.3	1.9	2.4	2.7	2.9	2.5	3.7	4.0	3.5	3.4	2.6	2.7	2.2	2.2	2.2	2.0	1.8	1.8	2.1	1.9	2.3	+0.4
College Students	1.4	1.7	1.9	0.5	0.8	0.6	1.6	0.9	1.3	0.6	1.5	1.2	1.2	1.6	1.0	1.9	0.6	1.6	1.3	0.7	1.1	0.4	0.8	0.9	0.6	-0.2
Young Adults	1.7	1.9	1.5	1.3	1.5	1.5	1.4	1.4	1.9	1.4	1.4	1.6	1.8	1.9	1.8	1.8	1.7	1.8	1.8	1.7	1.3	1.7	1.2	1.7	1.6	0.0

(Table continued on next page.)

TABLE 2-1 (cont.)
Trends in Lifetime Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Previously surveyed drugs that have been dropped																										
Nitrites [e]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	1.6	1.5	1.4	1.7	1.5	1.8	2.0	2.7	1.7	0.8	1.9	1.5	1.6	1.3	1.1	1.2	1.2	0.6	1.1	—	—	—	—	—	—	—
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	1.4	1.2	1.3	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Methaqualone [m,s]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	1.3	1.6	0.8	1.4	1.2	2.0	1.7	1.6	1.8	0.8	1.1	1.5	1.0	1.3	1.3	1.2	1.0	0.8	0.7	0.4	0.6	0.8	—	—	—	—
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Source. The Monitoring the Future study, the University of Michigan.

See footnotes following Table 2-4

TABLE 2-2
Trends in Annual Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Any Illicit Drug [a]																										
8th Grade	11.3	12.9	15.1	18.5	21.4	23.6	22.1	21.0	20.5	19.5	19.5	17.7	16.1	15.2	15.5	14.8	13.2	14.1	14.5	16.0	14.7	13.4‡	15.2	14.6	14.8	+0.2
10th Grade	21.4	20.4	24.7	30.0	33.3	37.5	38.5	35.0	35.9	36.4	37.2	34.8	32.0	31.1	29.8	28.7	28.1	26.9	29.4	30.2	31.1	30.1‡	32.1	29.9	27.9	-2.1
12th Grade	29.4	27.1	31.0	35.8	39.0	40.2	42.4	41.4	42.1	40.9	41.4	41.0	39.3	38.8	38.4	36.5	35.9	36.6	36.5	38.3	40.0	39.7‡	40.1	38.7	38.6	-0.1
College Students	29.2	30.6	30.6	31.4	33.5	34.2	34.1	37.8	36.9	36.1	37.9	37.0	36.5	36.2	36.6	33.9	35.0	35.2	36.0	35.0	36.3	37.3‡	40.5	38.6	41.4	+2.8
Young Adults	27.0	28.3	28.4	28.4	29.8	29.2	29.2	29.9	30.3	30.8	32.1	32.4	33.0	33.7	32.8	32.1	32.5	33.8	33.3	33.2	34.7	34.0‡	36.7	37.5	39.2	+1.7
Any Illicit Drug other than Marijuana [a,b]																										
8th Grade	8.4	9.3	10.4	11.3	12.6	13.1	11.8	11.0	10.5	10.2‡	10.8	8.8	8.8	7.9	8.1	7.7	7.0	7.4	7.0	7.1	6.4	5.5‡	6.3	6.4	6.3	-0.1
10th Grade	12.2	12.3	13.9	15.2	17.5	18.4	18.2	16.6	16.7	16.7‡	17.9	15.7	13.8	13.5	12.9	12.7	13.1	11.3	12.2	12.1	11.2	10.8‡	11.2	11.2	10.5	-0.7
12th Grade	16.2	14.9	17.1	18.0	19.4	19.8	20.7	20.2	20.7	20.4‡	21.6	20.9	19.8	20.5	19.7	19.2	18.5	18.3	17.0	17.3	17.6	17.0‡	17.8	15.9	15.2	-0.7
College Students	13.2	13.1	12.5	12.2	15.9	12.8	15.8	14.0	15.4	15.6‡	16.4	16.6	17.9	18.6	18.5	18.1	17.3	15.3	16.9	17.1	16.8	17.1‡	19.3	20.8	18.5	-2.4
Young Adults	14.3	14.1	13.0	13.0	13.8	13.2	13.6	13.2	13.7	14.9‡	15.4	16.3	18.1	18.8	18.5	18.4	18.1	18.9	17.4	18.5	17.6	17.2‡	18.1	21.2	19.5	-1.6
Any Illicit Drug including Inhalants [a,c,d]																										
8th Grade	16.7	18.2	21.1	24.2	27.1	28.7	27.2	26.2	25.3	24.0	23.9	21.4	20.4	20.2	20.4	19.7	18.0	19.0	18.8	20.3	18.2	17.0‡	17.6	16.8	17.0	+0.2
10th Grade	23.9	23.5	27.4	32.5	35.6	39.6	40.3	37.1	37.7	38.0	38.7	36.1	33.5	32.9	31.7	30.7	30.2	28.8	31.2	31.8	32.5	31.5‡	33.2	31.0	28.9	-2.1
12th Grade	31.2	28.8	32.5	37.6	40.2	41.9	43.3	42.4	42.8	42.5	42.6	42.1	40.5	39.1	40.3	38.0	37.0	37.3	37.6	39.2	41.5	40.2‡	42.3	39.2	40.2	+1.0
College Students	29.8	31.1	31.7	31.9	33.7	35.1	35.5	39.1	37.4	37.0	38.2	37.7	36.0	35.9	37.9	35.5	36.8	35.7	35.0	34.5	36.5	36.9‡	40.1	36.3	40.7	+4.4
Young Adults	27.8	29.2	28.9	29.2	30.4	30.2	30.1	30.6	30.6	31.2	33.2	32.4	32.7	34.9	32.8	32.6	33.2	33.5	33.1	33.3	34.2	34.2‡	38.3	35.3	37.3	+2.1
Marijuana/Hashish																										
8th Grade	6.2	7.2	9.2	13.0	15.8	18.3	17.7	16.9	16.5	15.6	15.4	14.6	12.8	11.8	12.2	11.7	10.3	10.9	11.8	13.7	12.5	11.4	12.7	11.7	11.8	+0.1
10th Grade	16.5	15.2	19.2	25.2	28.7	33.6	34.8	31.1	32.1	32.2	32.7	30.3	28.2	27.5	26.6	25.2	24.6	23.9	26.7	27.5	28.8	28.0	29.8	27.3	25.4	-1.9
12th Grade	23.9	21.9	26.0	30.7	34.7	35.8	38.5	37.5	37.8	36.5	37.0	36.2	34.9	34.3	33.6	31.5	31.7	32.4	32.8	34.8	36.4	36.4	36.4	35.1	34.9	-0.2
College Students	26.5	27.7	27.9	29.3	31.2	33.1	31.6	35.9	35.2	34.0	35.6	34.7	33.7	33.3	33.3	30.2	31.8	32.3	32.8	32.7	33.2	34.9	35.5	34.4	37.9	+3.5
Young Adults	23.8	25.2	25.1	25.5	26.5	27.0	26.8	27.4	27.6	27.9	29.2	29.3	29.0	29.2	28.2	27.7	28.5	28.6	29.3	28.7	31.0	30.2	32.2	31.6	34.0	+2.4 s
Synthetic Marijuana [p,q]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.4	4.0	3.3	3.1	-0.2
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.8	7.4	5.4	4.3	-1.1
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.4	11.3	7.9	5.8	5.2	-0.7
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.5	5.3	2.3	0.9	1.5	+0.6
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.4	5.3	3.2	1.3	1.5	+0.2

(Table continued on next page.)

TABLE 2-2 (cont.)
Trends in Annual Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Inhalants [c,d]																										
8th Grade	9.0	9.5	11.0	11.7	12.8	12.2	11.8	11.1	10.3	9.4	9.1	7.7	8.7	9.6	9.5	9.1	8.3	8.9	8.1	8.1	7.0	6.2	5.2	5.3	4.6	-0.7
10th Grade	7.1	7.5	8.4	9.1	9.6	9.5	8.7	8.0	7.2	7.3	6.6	5.8	5.4	5.9	6.0	6.5	6.6	5.9	6.1	5.7	4.5	4.1	3.5	3.3	2.9	-0.5
12th Grade	6.6	6.2	7.0	7.7	8.0	7.6	6.7	6.2	5.6	5.9	4.5	4.5	3.9	4.2	5.0	4.5	3.7	3.8	3.4	3.6	3.2	2.9	2.5	1.9	1.9	0.0
College Students	3.5	3.1	3.8	3.0	3.9	3.6	4.1	3.0	3.2	2.9	2.8	2.0	1.8	2.7	1.8	1.5	1.5	1.1	1.2	1.7	0.9	1.5	0.5	1.3	0.6	-0.7
Young Adults	2.0	1.9	2.1	2.1	2.4	2.2	2.3	2.1	2.3	2.1	1.7	1.6	1.4	1.7	1.3	1.3	0.8	1.4	0.9	1.2	0.8	1.1	0.5	1.1	0.9	-0.2
Hallucinogens [b,f]																										
8th Grade	1.9	2.5	2.6	2.7	3.6	4.1	3.7	3.4	2.9	2.8‡	3.4	2.6	2.6	2.2	2.4	2.1	1.9	2.1	1.9	2.2	2.2	1.6	1.6	1.3	1.3	0.0
10th Grade	4.0	4.3	4.7	5.8	7.2	7.8	7.6	6.9	6.9	6.1‡	6.2	4.7	4.1	4.1	4.0	4.1	4.4	3.9	4.1	4.2	4.1	3.5	3.4	3.3	3.1	-0.2
12th Grade	5.8	5.9	7.4	7.6	9.3	10.1	9.8	9.0	9.4	8.1‡	9.1	6.6	5.9	6.2	5.5	4.9	5.4	5.9	4.7	5.5	5.2	4.8	4.5	4.0	4.2	+0.2
College Students	6.3	6.8	6.0	6.2	8.2	6.9	7.7	7.2	7.8	6.7‡	7.5	6.3	7.4	5.9	5.0	5.6	4.9	5.1	4.7	4.9	4.1	4.5	4.5	4.0	4.3	+0.3
Young Adults	4.5	5.0	4.5	4.8	5.6	5.6	5.9	5.2	5.4	5.4‡	5.4	4.7	5.2	4.7	4.5	4.1	3.8	3.8	3.9	4.2	3.7	3.6	3.9	4.1	4.2	+0.1
LSD [b]																										
8th Grade	1.7	2.1	2.3	2.4	3.2	3.5	3.2	2.8	2.4	2.4	2.2	1.5	1.3	1.1	1.2	0.9	1.1	1.3	1.1	1.2	1.1	0.8	1.0	0.7	0.9	+0.2
10th Grade	3.7	4.0	4.2	5.2	6.5	6.9	6.7	5.9	6.0	5.1	4.1	2.6	1.7	1.6	1.5	1.7	1.9	1.8	1.9	1.9	1.8	1.7	1.7	1.9	2.0	+0.1
12th Grade	5.2	5.6	6.8	6.9	8.4	8.8	8.4	7.6	8.1	6.6	6.6	3.5	1.9	2.2	1.8	1.7	2.1	2.7	1.9	2.6	2.7	2.4	2.2	2.5	2.9	+0.4
College Students	5.1	5.7	5.1	5.2	6.9	5.2	5.0	4.4	5.4	4.3	4.0	2.1	1.4	1.2	0.7	1.4	1.3	2.6	2.0	2.1	2.0	1.9	2.6	2.2	3.0	+0.8
Young Adults	3.8	4.3	3.8	4.0	4.6	4.5	4.4	3.5	4.0	3.7	3.4	1.8	1.2	0.9	0.8	1.2	1.1	1.4	1.7	1.5	1.7	1.6	2.0	2.2	2.6	+0.4
Hallucinogens other than LSD [b]																										
8th Grade	0.7	1.1	1.0	1.3	1.7	2.0	1.8	1.6	1.5	1.4‡	2.4	2.1	2.1	1.9	2.0	1.8	1.6	1.6	1.5	1.8	1.8	1.3	1.2	1.0	0.8	-0.1
10th Grade	1.3	1.4	1.9	2.4	2.8	3.3	3.3	3.4	3.2	3.1‡	4.3	4.0	3.6	3.7	3.5	3.7	3.8	3.3	3.5	3.5	3.5	3.0	2.7	2.6	1.9	-0.6 s
12th Grade	2.0	1.7	2.2	3.1	3.8	4.4	4.6	4.6	4.3	4.4‡	5.9	5.4	5.4	5.6	5.0	4.6	4.8	5.0	4.2	4.8	4.3	4.0	3.7	3.0	2.9	-0.1
College Students	3.1	2.6	2.7	2.8	4.0	4.1	4.9	4.4	4.5	4.4‡	5.5	5.8	7.1	5.6	5.0	5.4	4.7	4.4	4.1	4.4	3.4	3.9	3.7	3.2	3.0	-0.2
Young Adults	1.7	1.9	1.9	2.0	2.5	2.8	3.1	3.0	3.0	3.4‡	3.5	4.0	4.9	4.5	4.2	3.8	3.6	3.4	3.3	3.7	3.2	2.9	3.2	3.1	3.0	-0.1
PCP [g]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	1.4	1.4	1.4	1.6	1.8	2.6	2.3	2.1	1.8	2.3	1.8	1.1	1.3	0.7	1.3	0.7	0.9	1.1	1.0	1.0	1.3	0.9	0.7	0.8	1.4	+0.6
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	0.3	0.3	0.2	0.3	0.3	0.2	0.5	0.6	0.6	0.3	0.6	0.3	0.3	0.1	0.6	0.2	0.3	0.4	0.1	0.2	0.3	*	0.2	0.1	0.0	-0.1

(Table continued on next page.)

TABLE 2-2 (cont.)
Trends in Annual Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Ecstasy (MDMA) [h]																										
8th Grade, original	—	—	—	—	—	2.3	2.3	1.8	1.7	3.1	3.5	2.9	2.1	1.7	1.7	1.4	1.5	1.7	1.3	2.4	1.7	1.1	1.1	0.9	—	—
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5	1.4	-0.1
10th Grade, original	—	—	—	—	—	4.6	3.9	3.3	4.4	5.4	6.2	4.9	3.0	2.4	2.6	2.8	3.5	2.9	3.7	4.7	4.5	3.0	3.6	2.3	—	—
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.8	2.4	-1.4 ss
12th Grade, original	—	—	—	—	—	4.6	4.0	3.6	5.6	8.2	9.2	7.4	4.5	4.0	3.0	4.1	4.5	4.3	4.3	4.5	5.3	3.8	4.0	3.6	—	—
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.0	3.6	-1.5 s
College Students																										
Original	0.9	2.0	0.8	0.5	2.4	2.8	2.4	3.9	5.5	9.1	9.2	6.8	4.4	2.2	2.9	2.6	2.2	3.7	3.1	4.3	4.2	5.8	5.3	5.0	—	—
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.9	4.2	-0.7
Young Adults																										
Original	0.8	1.0	0.8	0.7	1.6	1.7	2.1	2.9	3.6	7.2	7.5	6.2	4.5	3.5	3.0	3.0	2.5	3.3	3.1	3.5	3.6	4.1	4.2	4.8	—	—
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.1	4.4	-0.7
Salvia [p,q]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.7	1.6	1.4	1.2	0.6	0.7	+0.1
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.7	3.9	2.5	2.3	1.8	1.2	-0.7
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.7	5.5	5.9	4.4	3.4	1.8	1.9	0.0
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.8	3.5	3.1	1.5	1.0	1.1	0.4	-0.8
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.5	3.6	2.2	1.4	0.9	1.2	0.6	-0.6 s
Cocaine																										
8th Grade	1.1	1.5	1.7	2.1	2.6	3.0	2.8	3.1	2.7	2.6	2.5	2.3	2.2	2.0	2.2	2.0	2.0	1.8	1.6	1.6	1.4	1.2	1.0	1.0	0.9	-0.1
10th Grade	2.2	1.9	2.1	2.8	3.5	4.2	4.7	4.7	4.9	4.4	3.6	4.0	3.3	3.7	3.5	3.2	3.4	3.0	2.7	2.2	1.9	2.0	1.9	1.5	1.8	+0.3
12th Grade	3.5	3.1	3.3	3.6	4.0	4.9	5.5	5.7	6.2	5.0	4.8	5.0	4.8	5.3	5.1	5.7	5.2	4.4	3.4	2.9	2.9	2.7	2.6	2.6	2.5	0.0
College Students	3.6	3.0	2.7	2.0	3.6	2.9	3.4	4.6	4.6	4.8	4.7	4.8	5.4	6.6	5.7	5.1	5.4	4.4	4.2	3.5	3.3	3.1	2.7	4.4	4.3	-0.2
Young Adults	6.2	5.7	4.7	4.3	4.4	4.1	4.7	4.9	5.4	5.4	5.8	5.8	6.6	7.1	6.9	6.6	6.2	6.0	5.2	4.7	4.7	4.1	3.9	5.0	5.7	+0.7
Crack [i]																										
8th Grade	0.7	0.9	1.0	1.3	1.6	1.8	1.7	2.1	1.8	1.8	1.7	1.6	1.6	1.3	1.4	1.3	1.3	1.1	1.1	1.0	0.9	0.6	0.6	0.7	0.5	-0.2
10th Grade	0.9	0.9	1.1	1.4	1.8	2.1	2.2	2.5	2.4	2.2	1.8	2.3	1.6	1.7	1.7	1.3	1.3	1.3	1.2	1.0	0.9	0.8	0.8	0.5	0.7	+0.2
12th Grade	1.5	1.5	1.5	1.9	2.1	2.1	2.4	2.5	2.7	2.2	2.1	2.3	2.2	2.3	1.9	2.1	1.9	1.6	1.3	1.4	1.0	1.2	1.1	1.1	1.1	0.0
College Students	0.5	0.4	0.6	0.5	1.1	0.6	0.4	1.0	0.9	0.9	0.9	0.4	1.3	1.3	0.8	1.0	0.6	0.5	0.3	0.4	0.3	0.3	0.3	0.8	0.2	-0.5
Young Adults	1.2	1.4	1.3	1.1	1.1	1.1	1.0	1.1	1.4	1.2	1.3	1.0	1.0	1.3	1.2	1.1	1.0	0.9	0.7	0.5	0.6	0.5	0.3	0.4	0.4	0.0

(Table continued on next page.)

TABLE 2-2 (cont.)
Trends in Annual Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Other Cocaine [j]																										
8th Grade	1.0	1.2	1.3	1.7	2.1	2.5	2.2	2.4	2.3	1.9	1.9	1.8	1.6	1.6	1.7	1.6	1.5	1.4	1.3	1.3	1.1	1.0	0.8	0.8	0.8	0.0
10th Grade	2.1	1.7	1.8	2.4	3.0	3.5	4.1	4.0	4.4	3.8	3.0	3.4	2.8	3.3	3.0	2.9	3.1	2.6	2.3	1.9	1.7	1.8	1.6	1.3	1.5	+0.2
12th Grade	3.2	2.6	2.9	3.0	3.4	4.2	5.0	4.9	5.8	4.5	4.4	4.4	4.2	4.7	4.5	5.2	4.5	4.0	3.0	2.6	2.6	2.4	2.4	2.4	2.1	-0.3
College Students	3.2	2.4	2.5	1.8	3.3	2.3	3.0	4.2	4.2	4.1	4.1	5.0	5.1	6.3	5.0	3.8	5.3	4.2	4.2	4.0	3.0	3.0	2.8	4.1	4.2	+0.1
Young Adults	5.4	5.1	3.9	3.6	3.9	3.8	4.3	4.5	4.8	4.8	5.3	5.6	6.1	6.4	6.3	5.9	5.6	5.5	5.0	4.8	4.3	4.0	3.7	4.8	5.4	+0.6
Heroin [k,l]																										
8th Grade	0.7	0.7	0.7	1.2	1.4	1.6	1.3	1.3	1.4	1.1	1.0	0.9	0.9	1.0	0.8	0.8	0.8	0.9	0.7	0.8	0.7	0.5	0.5	0.5	0.3	-0.2 ss
10th Grade	0.5	0.6	0.7	0.9	1.1	1.2	1.4	1.4	1.4	1.4	0.9	1.1	0.7	0.9	0.9	0.9	0.8	0.8	0.9	0.8	0.8	0.6	0.6	0.5	0.5	-0.1
12th Grade	0.4	0.6	0.5	0.6	1.1	1.0	1.2	1.0	1.1	1.5	0.9	1.0	0.8	0.9	0.8	0.8	0.9	0.7	0.7	0.9	0.8	0.6	0.6	0.6	0.5	-0.1
College Students	0.1	0.1	0.1	0.1	0.3	0.4	0.3	0.6	0.2	0.5	0.4	0.1	0.2	0.4	0.3	0.3	0.2	0.3	0.4	0.2	0.1	0.1	0.3	0.0	0.1	+0.1
Young Adults	0.1	0.2	0.2	0.1	0.4	0.4	0.3	0.4	0.4	0.4	0.5	0.2	0.4	0.3	0.4	0.4	0.3	0.5	0.6	0.5	0.5	0.5	0.6	0.4	0.5	+0.1
With a Needle [l]																										
8th Grade	—	—	—	—	0.9	1.0	0.8	0.8	0.9	0.6	0.7	0.6	0.6	0.7	0.6	0.5	0.6	0.5	0.5	0.6	0.5	0.4	0.3	0.4	0.2	-0.2 ss
10th Grade	—	—	—	—	0.6	0.7	0.7	0.8	0.6	0.5	0.4	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.4	0.5	0.4	0.2	-0.2 s
12th Grade	—	—	—	—	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.3	0.7	0.6	0.4	0.4	0.5	0.3	-0.2
College Students	—	—	—	—	0.1	*	0.1	0.2	0.1	0.1	0.1	*	0.1	0.1	0.3	0.3	*	0.0	0.1	0.0	0.2	0.2	0.1	0.0	0.1	+0.1
Young Adults	—	—	—	—	0.1	0.1	0.1	0.1	0.1	*	0.3	*	*	0.1	0.2	0.3	0.1	0.1	0.1	0.2	0.4	0.3	0.3	0.2	0.2	0.0
Without a Needle [l]																										
8th Grade	—	—	—	—	0.8	1.0	0.8	0.8	0.9	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.6	0.4	0.5	0.4	0.3	0.3	0.2	0.2	0.0
10th Grade	—	—	—	—	0.8	0.9	1.1	1.0	1.1	1.1	0.7	0.8	0.5	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.3	0.3	0.0
12th Grade	—	—	—	—	1.0	1.0	1.2	0.8	1.0	1.6	0.8	0.8	0.8	0.7	0.8	0.6	1.0	0.5	0.6	0.8	0.7	0.4	0.4	0.5	0.4	-0.1
College Students	—	—	—	—	0.0	0.8	0.4	0.9	0.3	0.8	0.6	0.2	0.1	0.6	0.2	0.3	0.2	0.3	0.1	0.3	0.2	0.1	0.5	0.1	0.0	-0.1
Young Adults	—	—	—	—	0.3	0.4	0.4	0.7	0.6	0.5	0.9	0.2	0.4	0.3	0.4	0.5	0.3	0.4	0.6	0.4	0.2	0.4	0.7	0.3	0.5	+0.1
Narcotics other than Heroin [m,n]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	3.5	3.3	3.6	3.8	4.7	5.4	6.2	6.3	6.7	7.0	6.7‡	9.4	9.3	9.5	9.0	9.0	9.2	9.1	9.2	8.7	8.7	7.9	7.1	6.1	5.4	-0.7
College Students	2.7	2.7	2.5	2.4	3.8	3.1	4.2	4.2	4.3	4.5	5.7‡	7.4	8.7	8.2	8.4	8.8	7.7	6.5	7.6	7.2	6.2	5.4	5.4	4.8	3.3	-1.6
Young Adults	2.5	2.5	2.2	2.5	3.0	2.9	3.3	3.4	3.8	4.1	5.0‡	7.1	8.5	9.0	8.7	9.1	8.7	9.1	8.4	9.0	7.9	7.3	7.0	6.3	5.2	-1.1 s

(Table continued on next page.)

TABLE 2-2 (cont.)
Trends in Annual Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
OxyContin [m,p,aa,bb]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	1.3	1.7	1.7	1.8	2.6	1.8	2.1	2.0	2.1	1.8	1.6	2.0	1.0	0.8	-0.2
10th Grade	—	—	—	—	—	—	—	—	—	—	—	3.0	3.6	3.5	3.2	3.8	3.9	3.6	5.1	4.6	3.9	3.0	3.4	3.0	2.6	-0.3
12th Grade	—	—	—	—	—	—	—	—	—	—	—	4.0	4.5	5.0	5.5	4.3	5.2	4.7	4.9	5.1	4.9	4.3	3.6	3.3	3.7	+0.3
College Students	—	—	—	—	—	—	—	—	—	—	—	1.5	2.2	2.5	2.1	3.0	2.8	3.6	5.0	2.3	2.4	1.2	2.3	1.3	1.5	+0.2
Young Adults	—	—	—	—	—	—	—	—	—	—	—	1.9	2.6	3.1	3.1	3.1	2.9	3.9	5.2	3.2	2.8	2.3	2.8	2.5	2.5	0.0
Vicodin [m,p,aa,bb]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	2.5	2.8	2.5	2.6	3.0	2.7	2.9	2.5	2.7	2.1	1.3	1.4	1.0	0.9	-0.2
10th Grade	—	—	—	—	—	—	—	—	—	—	—	6.9	7.2	6.2	5.9	7.0	7.2	6.7	8.1	7.7	5.9	4.4	4.6	3.4	2.5	-0.9
12th Grade	—	—	—	—	—	—	—	—	—	—	—	9.6	10.5	9.3	9.5	9.7	9.6	9.7	9.7	8.0	8.1	7.5	5.3	4.8	4.4	-0.4
College Students	—	—	—	—	—	—	—	—	—	—	—	6.9	7.5	7.4	9.6	7.6	6.7	6.7	8.4	4.9	5.8	3.8	4.4	2.8	1.6	-1.2
Young Adults	—	—	—	—	—	—	—	—	—	—	—	8.2	8.6	8.9	9.3	9.1	8.9	9.1	8.9	7.8	7.1	6.3	6.2	4.8	3.8	-1.1
Amphetamines [m,o]																										
8th Grade	6.2	6.5	7.2	7.9	8.7	9.1	8.1	7.2	6.9	6.5	6.7	5.5	5.5	4.9	4.9	4.7	4.2	4.5	4.1	3.9	3.5	2.9‡	4.2	4.3	4.1	-0.1
10th Grade	8.2	8.2	9.6	10.2	11.9	12.4	12.1	10.7	10.4	11.1	11.7	10.7	9.0	8.5	7.8	7.9	8.0	6.4	7.1	7.6	6.6	6.5‡	7.9	7.6	6.8	-0.8
12th Grade	8.2	7.1	8.4	9.4	9.3	9.5	10.2	10.1	10.2	10.5	10.9	11.1	9.9	10.0	8.6	8.1	7.5	6.8	6.6	7.4	8.2	7.9‡	9.2	8.1	7.7	-0.4
College Students	3.9	3.6	4.2	4.2	5.4	4.2	5.7	5.1	5.8	6.6	7.2	7.0	7.1	7.0	6.7	6.0	6.9	5.7	7.5	9.0	9.3	11.1‡	9.6	10.1	9.7	-0.4
Young Adults	4.3	4.1	4.0	4.5	4.6	4.2	4.6	4.5	4.7	5.4	5.8	5.9	5.8	6.2	5.1	5.6	5.6	5.3	6.0	7.1	7.2	7.8‡	7.5	8.0	7.9	-0.2
Ritalin [m,p,q,bb]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	2.9	2.8	2.6	2.5	2.4	2.6	2.1	1.6	1.8	1.5	1.3	0.7	1.1	0.9	0.6	-0.3
10th Grade	—	—	—	—	—	—	—	—	—	—	4.8	4.8	4.1	3.4	3.4	3.6	2.8	2.9	3.6	2.7	2.6	1.9	1.8	1.8	1.6	-0.2
12th Grade	—	—	—	—	—	—	—	—	—	—	5.1	4.0	4.0	5.1	4.4	4.4	3.8	3.4	2.1	2.7	2.6	2.6	2.3	1.8	2.0	+0.2
College Students	—	—	—	—	—	—	—	—	—	—	—	5.7	4.7	4.7	4.2	3.9	3.7	3.2	1.7	1.9	2.3	1.8	3.6	1.6	2.0	+0.3
Young Adults	—	—	—	—	—	—	—	—	—	—	—	2.9	2.9	2.7	2.5	2.6	2.4	2.4	1.7	1.7	1.5	1.6	2.0	1.6	1.8	+0.2
Adderall [m,p,q,bb]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.0	2.3	1.7	1.7	1.8	1.3	1.0	-0.2
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.7	5.3	4.6	4.5	4.4	4.6	5.2	+0.6
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.4	6.5	6.5	7.6	7.4	6.8	7.5	+0.7
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10.2	9.0	9.8	9.0	10.7	9.6	10.7	+1.1
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.8	7.0	6.6	7.4	7.0	7.8	7.7	-0.1

(Table continued on next page.)

TABLE 2-2 (cont.)
Trends in Annual Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Methamphetamine [p,q]																										
8th Grade	—	—	—	—	—	—	—	—	3.2	2.5	2.8	2.2	2.5	1.5	1.8	1.8	1.1	1.2	1.0	1.2	0.8	1.0	1.0	0.6	0.5	-0.1
10th Grade	—	—	—	—	—	—	—	—	4.6	4.0	3.7	3.9	3.3	3.0	2.9	1.8	1.6	1.5	1.6	1.6	1.4	1.0	1.0	0.8	0.8	0.0
12th Grade	—	—	—	—	—	—	—	—	4.7	4.3	3.9	3.6	3.2	3.4	2.5	2.5	1.7	1.2	1.2	1.0	1.4	1.1	0.9	1.0	0.6	-0.4
College Students	—	—	—	—	—	—	—	—	3.3	1.6	2.4	1.2	2.6	2.9	1.7	1.2	0.4	0.5	0.3	0.4	0.2	0.0	0.4	0.1	0.5	+0.4
Young Adults	—	—	—	—	—	—	—	—	2.8	2.5	2.8	2.5	2.7	2.8	2.4	1.9	1.5	1.0	0.9	0.7	0.5	1.0	0.6	0.5	0.7	+0.1
Crystal Methamphetamine (Ice) [q]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	1.4	1.3	1.7	1.8	2.4	2.8	2.3	3.0	1.9	2.2	2.5	3.0	2.0	2.1	2.3	1.9	1.6	1.1	0.9	0.9	1.2	0.8	1.1	0.8	0.5	-0.2
College Students	0.1	0.2	0.7	0.8	1.1	0.3	0.8	1.0	0.5	0.5	0.6	0.8	0.9	1.1	1.4	0.6	0.7	0.1	0.1	0.5	0.1	0.6	0.0	0.0	0.0	0.0
Young Adults	0.3	0.4	0.8	0.9	1.2	0.9	0.9	1.1	0.9	1.2	1.1	1.4	1.3	1.5	1.6	1.1	1.1	0.8	0.8	0.5	0.5	0.6	0.8	0.3	0.5	+0.2
Bath Salts (Synthetic stimulants) [p,q]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.8	1.0	0.5	0.4	-0.1
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.6	0.9	0.9	0.7	-0.2
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.3	0.9	0.9	1.0	+0.1
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.3	0.1	0.2	0.1	-0.1
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	0.4	0.4	0.3	-0.1
Sedatives (Barbiturates) [m,r]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	3.4	2.8	3.4	4.1	4.7	4.9	5.1	5.5	5.8	6.2	5.7	6.7	6.0‡	6.5	7.2	6.6	6.2	5.8	5.2	4.8	4.3	4.5	4.8	4.3	3.6	-0.6 s
College Students	1.2	1.4	1.5	1.2	2.0	2.3	3.0	2.5	3.2	3.7	3.8	3.7	4.1	4.2	3.9	3.4	3.6	3.7	3.1	2.5	1.7	2.2‡	2.7	3.1	2.3	-0.8
Young Adults	1.8	1.6	1.9	1.8	2.1	2.2	2.4	2.5	2.8	3.4	3.7	3.9	3.9	4.4	4.2	3.9	4.2	4.7	3.8	3.3	3.2	2.7‡	3.4	3.2	2.7	-0.5
Tranquilizers [b,m]																										
8th Grade	1.8	2.0	2.1	2.4	2.7	3.3	2.9	2.6	2.5	2.6‡	2.8	2.6	2.7	2.5	2.8	2.6	2.4	2.4	2.6	2.8	2.0	1.8	1.8	1.7	1.7	0.0
10th Grade	3.2	3.5	3.3	3.3	4.0	4.6	4.9	5.1	5.4	5.6‡	7.3	6.3	5.3	5.1	4.8	5.2	5.3	4.6	5.0	5.1	4.5	4.3	3.7	3.9	3.9	0.0
12th Grade	3.6	2.8	3.5	3.7	4.4	4.6	4.7	5.5	5.8	5.7‡	6.9	7.7	6.7	7.3	6.8	6.6	6.2	6.2	6.3	5.6	5.6	5.3	4.6	4.7	4.7	0.0
College Students	2.4	2.9	2.4	1.8	2.9	2.8	3.8	3.9	3.8	4.2‡	5.1	6.7	6.9	6.7	6.4	5.8	5.5	5.0	5.4	4.9	4.2	3.4	4.4	3.5	4.3	+0.8
Young Adults	3.5	3.4	3.1	2.9	3.4	3.2	3.1	3.8	3.7	4.6‡	5.5	7.0	6.8	7.4	6.7	6.5	7.1	6.8	6.4	6.3	5.9	5.3	5.4	4.8	5.0	+0.3

(Table continued on next page.)

TABLE 2-2 (cont.)
Trends in Annual Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Any Prescription Drug [o,t]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17.1	16.8	15.8	15.4	14.4	15.0	15.2	14.8‡	15.9	13.9	12.9	-1.0
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Over-the-counter Cough/Cold Medicines [p,q]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.2	4.0	3.6	3.8	3.2	2.7	3.0	2.9	2.0	1.6	-0.4
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.3	5.4	5.3	6.0	5.1	5.5	4.7	4.3	3.7	3.3	-0.4
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.9	5.8	5.5	5.9	6.6	5.3	5.6	5.0	4.1	4.6	+0.4
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rohypnol [u]																										
8th Grade	—	—	—	—	—	1.0	0.8	0.8	0.5	0.5	0.7	0.3	0.5	0.6	0.7	0.5	0.7	0.5	0.4	0.5	0.8	0.4	0.4	0.3	0.3	0.0
10th Grade	—	—	—	—	—	1.1	1.3	1.2	1.0	0.8	1.0	0.7	0.6	0.7	0.5	0.5	0.7	0.4	0.4	0.6	0.6	0.5	0.6	0.5	0.2	-0.3
12th Grade	—	—	—	—	—	1.1	1.2	1.4	1.0	0.8	0.9‡	1.6	1.3	1.6	1.2	1.1	1.0	1.3	1.0	1.5	1.3	1.5	0.9	0.7	1.0	+0.3
College Students	—	—	—	—	—	—	—	—	—	—	—	0.7	0.4	0.3	0.1	0.2	0.1	0.3	0.0	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	0.3	0.5	0.1	0.1	0.2	0.3	0.2	0.1	—	—	—	—	—	—	—
GHB [p,cc]																										
8th Grade	—	—	—	—	—	—	—	—	—	1.2	1.1	0.8	0.9	0.7	0.5	0.8	0.7	1.1	0.7	0.6	0.6	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	1.1	1.0	1.4	1.4	0.8	0.8	0.7	0.6	0.5	1.0	0.6	0.5	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	1.9	1.6	1.5	1.4	2.0	1.1	1.1	0.9	1.2	1.1	1.4	1.4	1.4	1.0	1.0	0.7	-0.2
College Students	—	—	—	—	—	—	—	—	—	—	—	0.6	0.3	0.7	0.4	*	0.1	0.2	0.0	0.1	0.1	0.0	0.1	0.2	0.0	-0.2
Young Adults	—	—	—	—	—	—	—	—	—	—	—	0.8	0.6	0.5	0.3	0.2	0.4	0.3	0.2	0.3	0.3	0.4	0.3	0.3	0.2	-0.1
Ketamine [p,dd]																										
8th Grade	—	—	—	—	—	—	—	—	—	1.6	1.3	1.3	1.1	0.9	0.6	0.9	1.0	1.2	1.0	1.0	0.8	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	2.1	2.1	2.2	1.9	1.3	1.0	1.0	0.8	1.0	1.3	1.1	1.2	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	2.5	2.5	2.6	2.1	1.9	1.6	1.4	1.3	1.5	1.7	1.6	1.7	1.5	1.4	1.5	1.4	-0.1
College Students	—	—	—	—	—	—	—	—	—	—	—	1.3	1.0	1.5	0.5	0.9	0.2	0.4	0.1	0.7	0.6	0.4	0.9	0.1	0.6	+0.5
Young Adults	—	—	—	—	—	—	—	—	—	—	—	1.2	0.9	0.6	0.5	0.5	0.3	0.4	0.5	0.8	0.5	0.8	0.5	0.4	0.7	+0.2

(Table continued on next page.)

TABLE 2-2 (cont.)
Trends in Annual Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Alcohol [v]																										
Any Use																										
8th Grade	54.0	53.7‡	45.4	46.8	45.3	46.5	45.5	43.7	43.5	43.1	41.9	38.7	37.2	36.7	33.9	33.6	31.8	32.1	30.3	29.3	26.9	23.6	22.1	20.8	21.0	+0.2
10th Grade	72.3	70.2‡	63.4	63.9	63.5	65.0	65.2	62.7	63.7	65.3	63.5	60.0	59.3	58.2	56.7	55.8	56.3	52.5	52.8	52.1	49.8	48.5	47.1	44.0	41.9	-2.1
12th Grade	77.7	76.8‡	72.7	73.0	73.7	72.5	74.8	74.3	73.8	73.2	73.3	71.5	70.1	70.6	68.6	66.5	66.4	65.5	66.2	65.2	63.5	63.5	62.0	60.2	58.2	-2.0
College Students	88.3	86.9	85.1	82.7	83.2	82.9	82.4	84.6	83.6	83.2	83.0	82.9	81.7	81.2	83.0	82.1	80.9	82.1	79.4	78.6	77.4	79.2	75.6	76.1	79.0	+2.9
Young Adults	86.9	86.2	85.3	83.7	84.7	84.0	84.3	84.0	84.1	84.0	84.3	84.9	83.3	84.4	83.8	84.4	84.0	83.6	83.8	82.7	83.5	82.5	82.5	82.3	81.2	-1.1
Been Drunk [w]																										
8th Grade	17.5	18.3	18.2	18.2	18.4	19.8	18.4	17.9	18.5	18.5	16.6	15.0	14.5	14.5	14.1	13.9	12.6	12.7	12.2	11.5	10.5	8.6	8.4	7.3	7.7	+0.4
10th Grade	40.1	37.0	37.8	38.0	38.5	40.1	40.7	38.3	40.9	41.6	39.9	35.4	34.7	35.1	34.2	34.5	34.4	30.0	31.2	29.9	28.8	28.2	27.1	24.6	23.4	-1.2
12th Grade	52.7	50.3	49.6	51.7	52.5	51.9	53.2	52.0	53.2	51.8	53.2	50.4	48.0	51.8	47.7	47.9	46.1	45.6	47.0	44.0	42.2	45.0	43.5	41.4	37.7	-3.8 s
College Students	69.1	67.3	65.6	63.1	62.1	64.2	66.8	67.0	65.4	64.7	68.8	66.0	64.7	67.1	64.2	66.2	64.8	66.8	61.5	63.8	60.1	61.5	57.9	60.5	61.6	+1.1
Young Adults	62.0	60.9	61.1	58.8	61.6	59.9	63.2	59.6	63.2	60.6	63.1	61.8	62.9	63.8	63.5	65.7	65.8	66.0	65.5	64.8	64.0	64.6	63.1	63.5	61.2	-2.4
Flavored Alcoholic Beverages [g,p,ee]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	30.4	27.9	26.8	26.0	25.0	22.2	21.9	19.2	17.0	15.7	13.4	13.4	-0.1
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	49.7	48.5	48.8	45.9	43.4	41.5	41.0	38.3	37.8	35.6	33.2	31.4	-1.9
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	55.2	55.8	58.4	54.7	53.6	51.8	53.4	47.9	47.0	44.4	44.2	43.6	42.8	-0.8
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	63.2	67.0	63.5	62.6	65.0	66.1	60.3	63.0	58.1	57.6	64.2	64.5	+0.3
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	62.7	58.4	58.5	58.9	58.3	57.0	52.0	56.3	54.8	54.1	55.4	57.3	+1.9
Alcoholic Beverages containing Caffeine [p,w]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.8‡	10.9	10.2	9.5	8.4	-1.1
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	22.5‡	19.7	16.9	14.3	12.8	-1.5
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	26.4‡	26.4	23.5	20.0	18.3	-1.7
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	33.6‡	33.8	39.1	32.8	34.1	+1.4
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	28.1‡	36.7	36.9	35.0	33.5	-1.5
Cigarettes																										
Any Use																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
College Students	35.6	37.3	38.8	37.6	39.3	41.4	43.6	44.3	44.5	41.3	39.0	38.3	35.2	36.7	36.0	30.9	30.7	30.0	29.9	28.1	25.8	23.4	23.2	22.6	20.1	-2.5
Young Adults	37.7	37.9	37.8	38.3	38.8	40.3	41.8	41.6	41.1	40.9	41.1	39.1	38.6	39.0	39.1	36.9	36.2	35.0	33.9	33.0	31.5	29.8	29.8	27.0	26.2	-0.8

(Table continued on next page.)

TABLE 2-2 (cont.)
Trends in Annual Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Tobacco using a Hookah [s]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17.1	18.5	18.3	21.4	22.9	19.8	-3.1
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.9	25.7	26.1	32.7	23.4	-9.3 sss
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20.1	19.1	20.4	23.3	19.2	-4.0 ss
Small Cigars [s]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	23.1	19.5	19.9	20.4	18.9	15.9	-3.0
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	23.6	20.3	19.0	24.2	19.6	-4.6
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19.2	18.0	18.4	18.6	17.9	-0.7
Dissolvable Tobacco [p,s]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	1.1	1.1	0.9	-0.2
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.6	1.2	1.3	1.1	-0.3
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5	1.6	1.9	1.1	1.4	+0.3
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0	0.3	0.2	0.5	1.1	+0.6
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.3	0.6	0.3	0.5	0.4	-0.1
Snus [p,s]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.4	2.0	2.2	1.9	-0.3
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.9	5.2	4.5	4.0	-0.5
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.9	7.9	7.7	5.8	5.8	0.0
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.5	4.7	4.8	5.0	5.8	+0.8
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.1	5.7	4.8	4.8	4.8	0.0
Steroids [y,z]																										
8th Grade	1.0	1.1	0.9	1.2	1.0	0.9	1.0	1.2	1.7	1.7	1.6	1.5	1.4	1.1	1.1	0.9	0.8	0.9	0.8	0.5	0.7	0.6	0.6	0.6	0.5	0.0
10th Grade	1.1	1.1	1.0	1.1	1.2	1.2	1.2	1.2	1.7	2.2	2.1	2.2	1.7	1.5	1.3	1.2	1.1	0.9	0.8	1.0	0.9	0.8	0.8	0.8	0.7	0.0
12th Grade	1.4	1.1	1.2	1.3	1.5	1.4	1.4	1.7	1.8	1.7	2.4	2.5	2.1	2.5	1.5	1.8	1.4	1.5	1.5	1.5	1.2	1.3	1.5	1.5	1.7	+0.3
College Students	0.6	0.2	0.9	0.2	0.4	0.2	0.7	0.2	0.9	0.1	0.6	0.5	0.3	0.6	0.5	0.8	0.6	0.1	0.7	0.3	0.2	0.3	0.8	0.5	0.3	-0.2
Young Adults	0.5	0.4	0.3	0.4	0.5	0.3	0.5	0.4	0.6	0.4	0.4	0.4	0.5	0.5	0.5	0.3	0.7	0.4	0.7	0.8	0.2	0.4	0.5	0.7	0.5	-0.2

(Table continued on next page.)

TABLE 2-2 (cont.)
Trends in Annual Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Previously surveyed drugs that have been dropped																										
Nitrites [e]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	0.9	0.5	0.9	1.1	1.1	1.6	1.2	1.4	0.9	0.6	0.6	1.1	0.9	0.8	0.6	0.5	0.8	0.6	0.9	—	—	—	—	—	—	—
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	0.2	0.1	0.4	0.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Provigil [m,q]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.8	1.3	1.5	—	—	—	—	—
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.2	0.0	0.2	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	0.5	0.3	—	—	—	—	—
Methaqualone [m,s]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	0.5	0.6	0.2	0.8	0.7	1.1	1.0	1.1	1.1	0.3	0.8	0.9	0.6	0.8	0.9	0.8	0.5	0.5	0.6	0.3	0.3	0.4	—	—	—	—
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bidis [p,ff]																										
8th Grade	—	—	—	—	—	—	—	—	—	3.9	2.7	2.7	2.0	1.7	1.6	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	6.4	4.9	3.1	2.8	2.1	1.6	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	9.2	7.0	5.9	4.0	3.6	3.3	2.3	1.7	1.9	1.5	1.4	—	—	—	—	—	—
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Kreteks [p,ff]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	2.6	2.6	2.0	1.9	1.4	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	6.0	4.9	3.8	3.7	2.8	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	10.1	8.4	6.7	6.5	7.1	6.2	6.8	6.8	5.5	4.6	2.9	3.0	1.6	1.6	—	—
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Source. The Monitoring the Future study, the University of Michigan.

See footnotes following Table 2-4.

TABLE 2-3
Trends in 30-Day Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Any Illicit Drug [a]																										
8th Grade	5.7	6.8	8.4	10.9	12.4	14.6	12.9	12.1	12.2	11.9	11.7	10.4	9.7	8.4	8.5	8.1	7.4	7.6	8.1	9.5	8.5	7.7‡	8.7	8.3	8.1	-0.2
10th Grade	11.6	11.0	14.0	18.5	20.2	23.2	23.0	21.5	22.1	22.5	22.7	20.8	19.5	18.3	17.3	16.8	16.9	15.8	17.8	18.5	19.2	18.6‡	19.2	18.5	16.5	-2.1 s
12th Grade	16.4	14.4	18.3	21.9	23.8	24.6	26.2	25.6	25.9	24.9	25.7	25.4	24.1	23.4	23.1	21.5	21.9	22.3	23.3	23.8	25.2	25.2‡	25.2	23.7	23.6	-0.1
College Students	15.2	16.1	15.1	16.0	19.1	17.6	19.2	19.7	21.6	21.5	21.9	21.5	21.4	21.2	19.5	19.2	19.3	18.9	20.7	19.2	21.4	22.3‡	22.8	22.7	23.4	+0.7
Young Adults	15.1	14.8	14.9	15.3	15.8	15.8	16.4	16.1	17.1	18.1	18.8	18.9	19.9	19.1	18.6	18.5	18.9	19.3	19.8	18.9	20.6	19.9‡	21.6	22.3	23.2	+0.9
Any Illicit Drug other than Marijuana [a,b]																										
8th Grade	3.8	4.7	5.3	5.6	6.5	6.9	6.0	5.5	5.5	5.6‡	5.5	4.7	4.7	4.1	4.1	3.8	3.6	3.8	3.5	3.5	3.4	2.6‡	3.6	3.3	3.1	-0.2
10th Grade	5.5	5.7	6.5	7.1	8.9	8.9	8.8	8.6	8.6	8.5‡	8.7	8.1	6.9	6.9	6.4	6.3	6.9	5.3	5.7	5.8	5.4	5.0‡	4.9	5.6	4.9	-0.7 s
12th Grade	7.1	6.3	7.9	8.8	10.0	9.5	10.7	10.7	10.4	10.4‡	11.0	11.3	10.4	10.8	10.3	9.8	9.5	9.3	8.6	8.6	8.9	8.4‡	8.2	7.7	7.6	-0.1
College Students	4.3	4.6	5.4	4.6	6.3	4.5	6.8	6.1	6.4	6.9‡	7.5	7.8	8.2	9.1	8.2	8.2	8.1	7.3	8.4	8.1	8.2	7.8‡	8.8	10.0	9.2	-0.9
Young Adults	5.4	5.5	4.9	5.3	5.7	4.7	5.5	5.5	6.0	6.4‡	7.0	7.7	8.3	8.5	8.2	8.1	8.6	8.9	8.5	8.6	8.4	7.8‡	8.3	9.9	8.7	-1.3
Any Illicit Drug including Inhalants [a,c,d]																										
8th Grade	8.8	10.0	12.0	14.3	16.1	17.5	16.0	14.9	15.1	14.4	14.0	12.6	12.1	11.2	11.2	10.9	10.1	10.4	10.6	11.7	10.5	9.5‡	10.0	9.5	9.3	-0.3
10th Grade	13.1	12.6	15.5	20.0	21.6	24.5	24.1	22.5	23.1	23.6	23.6	21.7	20.5	19.3	18.4	17.7	18.1	16.8	18.8	19.4	20.1	19.3‡	20.0	19.1	17.1	-2.0 s
12th Grade	17.8	15.5	19.3	23.0	24.8	25.5	26.9	26.6	26.4	26.4	26.5	25.9	24.6	23.3	24.2	22.1	22.8	22.8	24.1	24.5	26.2	25.2‡	26.5	24.3	24.7	+0.4
College Students	15.1	16.5	15.7	16.4	19.6	18.0	19.6	21.0	21.8	22.6	21.9	21.9	21.6	21.7	19.0	19.7	18.1	18.9	21.3	20.5	20.6	20.0‡	23.5	21.1	23.3	+2.2
Young Adults	15.4	15.3	15.1	16.1	16.1	16.4	16.9	16.7	17.4	18.8	19.2	19.5	20.1	19.6	18.0	18.4	19.1	19.3	20.3	19.6	20.3	19.1‡	23.5	20.9	22.7	+1.8
Marijuana/Hashish																										
8th Grade	3.2	3.7	5.1	7.8	9.1	11.3	10.2	9.7	9.7	9.1	9.2	8.3	7.5	6.4	6.6	6.5	5.7	5.8	6.5	8.0	7.2	6.5	7.0	6.5	6.5	0.0
10th Grade	8.7	8.1	10.9	15.8	17.2	20.4	20.5	18.7	19.4	19.7	19.8	17.8	17.0	15.9	15.2	14.2	14.2	13.8	15.9	16.7	17.6	17.0	18.0	16.6	14.8	-1.8
12th Grade	13.8	11.9	15.5	19.0	21.2	21.9	23.7	22.8	23.1	21.6	22.4	21.5	21.2	19.9	19.8	18.3	18.8	19.4	20.6	21.4	22.6	22.9	22.7	21.2	21.3	+0.1
College Students	14.1	14.6	14.2	15.1	18.6	17.5	17.7	18.6	20.7	20.0	20.2	19.7	19.3	18.9	17.1	16.7	16.8	17.0	18.5	17.5	19.4	20.5	20.6	20.8	21.1	+0.3
Young Adults	13.5	13.3	13.4	14.1	14.0	15.1	15.0	14.9	15.6	16.1	16.7	16.9	17.3	16.5	15.8	15.7	16.0	16.0	17.0	16.1	18.3	17.7	19.0	19.2	20.1	+0.9
Inhalants [c,d]																										
8th Grade	4.4	4.7	5.4	5.6	6.1	5.8	5.6	4.8	5.0	4.5	4.0	3.8	4.1	4.5	4.2	4.1	3.9	4.1	3.8	3.6	3.2	2.7	2.3	2.2	2.0	-0.2
10th Grade	2.7	2.7	3.3	3.6	3.5	3.3	3.0	2.9	2.6	2.6	2.4	2.4	2.2	2.4	2.2	2.3	2.5	2.1	2.2	2.0	1.7	1.4	1.3	1.1	1.2	+0.1
12th Grade	2.4	2.3	2.5	2.7	3.2	2.5	2.5	2.3	2.0	2.2	1.7	1.5	1.5	1.5	2.0	1.5	1.2	1.4	1.2	1.4	1.0	0.9	1.0	0.7	0.7	0.0
College Students	0.9	1.1	1.3	0.6	1.6	0.8	0.8	0.6	1.5	0.9	0.4	0.7	0.4	0.4	0.3	0.4	0.1	0.4	0.1	0.5	0.3	0.2	0.1	0.3	0.2	-0.1
Young Adults	0.5	0.6	0.7	0.5	0.7	0.5	0.5	0.7	0.8	0.5	0.4	0.5	0.3	0.3	0.2	0.3	0.2	0.4	0.2	0.1	0.1	0.3	0.1	0.3	0.2	-0.1

(Table continued on next page.)

TABLE 2-3 (cont.)
Trends in 30-Day Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Hallucinogens [b,f]																										
8th Grade	0.8	1.1	1.2	1.3	1.7	1.9	1.8	1.4	1.3	1.2‡	1.6	1.2	1.2	1.0	1.1	0.9	1.0	0.9	0.9	1.0	1.0	0.6	0.8	0.5	0.6	+0.1
10th Grade	1.6	1.8	1.9	2.4	3.3	2.8	3.3	3.2	2.9	2.3‡	2.1	1.6	1.5	1.6	1.5	1.5	1.7	1.3	1.4	1.6	1.4	1.2	1.1	1.2	0.9	-0.2
12th Grade	2.2	2.1	2.7	3.1	4.4	3.5	3.9	3.8	3.5	2.6‡	3.3	2.3	1.8	1.9	1.9	1.5	1.7	2.2	1.6	1.9	1.6	1.6	1.4	1.5	1.6	0.0
College Students	1.2	2.3	2.5	2.1	3.3	1.9	2.1	2.1	2.0	1.4‡	1.8	1.2	1.8	1.3	1.2	0.9	1.3	1.7	1.0	1.4	1.2	1.1	1.0	1.0	1.4	+0.4
Young Adults	1.1	1.5	1.2	1.4	1.7	1.2	1.5	1.4	1.3	1.2‡	1.2	0.9	1.2	0.9	0.8	0.7	0.9	0.9	0.8	1.0	0.9	0.6	1.0	0.9	1.1	+0.1
LSD [b]																										
8th Grade	0.6	0.9	1.0	1.1	1.4	1.5	1.5	1.1	1.1	1.0	1.0	0.7	0.6	0.5	0.5	0.4	0.5	0.5	0.5	0.6	0.5	0.3	0.5	0.3	0.4	+0.1
10th Grade	1.5	1.6	1.6	2.0	3.0	2.4	2.8	2.7	2.3	1.6	1.5	0.7	0.6	0.6	0.6	0.7	0.7	0.7	0.5	0.7	0.7	0.5	0.6	0.6	0.6	0.0
12th Grade	1.9	2.0	2.4	2.6	4.0	2.5	3.1	3.2	2.7	1.6	2.3	0.7	0.6	0.7	0.7	0.6	0.6	1.1	0.5	0.8	0.8	0.8	0.8	1.0	1.1	0.0
College Students	0.8	1.8	1.6	1.8	2.5	0.9	1.1	1.5	1.2	0.9	1.0	0.2	0.2	0.2	0.1	0.3	0.3	0.8	0.3	0.7	0.5	0.4	0.4	0.5	0.7	+0.2
Young Adults	0.8	1.1	0.8	1.1	1.3	0.7	0.9	1.0	0.8	0.8	0.7	0.3	0.2	0.1	0.1	0.2	0.2	0.4	0.2	0.4	0.3	0.3	0.4	0.4	0.7	+0.3
Hallucinogens other than LSD [b]																										
8th Grade	0.3	0.4	0.5	0.7	0.8	0.9	0.7	0.7	0.6	0.6‡	1.1	1.0	1.0	0.8	0.9	0.7	0.7	0.7	0.7	0.8	0.7	0.5	0.5	0.4	0.3	0.0
10th Grade	0.4	0.5	0.7	1.0	1.0	1.0	1.2	1.4	1.2	1.2‡	1.4	1.4	1.2	1.4	1.3	1.3	1.4	1.0	1.1	1.2	1.1	0.9	0.8	0.8	0.6	-0.3 s
12th Grade	0.7	0.5	0.8	1.2	1.3	1.6	1.7	1.6	1.6	1.7‡	1.9	2.0	1.5	1.7	1.6	1.3	1.4	1.6	1.4	1.5	1.2	1.3	1.0	1.0	0.9	-0.1
College Students	0.6	0.7	1.1	0.8	1.6	1.2	1.2	0.7	1.2	0.8‡	0.8	1.1	1.7	1.2	1.1	0.7	1.1	1.3	0.8	1.2	0.8	0.7	0.8	0.7	0.9	+0.2
Young Adults	0.3	0.5	0.6	0.6	0.6	0.6	0.7	0.5	0.6	0.7‡	0.6	0.8	1.2	0.9	0.8	0.6	0.8	0.7	0.7	0.8	0.6	0.4	0.7	0.6	0.5	-0.1
PCP [g]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	0.5	0.6	1.0	0.7	0.6	1.3	0.7	1.0	0.8	0.9	0.5	0.4	0.6	0.4	0.7	0.4	0.5	0.6	0.5	0.8	0.8	0.5	0.4	—	—	—
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	0.1	0.2	0.2	0.1	*	0.1	0.1	0.2	0.2	*	*	0.1	0.1	0.1	*	*	*	0.1	*	0.0	0.1	0.0	0.2	0.1	0.0	-0.1
Ecstasy (MDMA) [h]																										
8th Grade, original	—	—	—	—	—	1.0	1.0	0.9	0.8	1.4	1.8	1.4	0.7	0.8	0.6	0.7	0.6	0.8	0.6	1.1	0.6	0.5	0.5	0.4	—	—
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.7	0.5	-0.2
10th Grade, original	—	—	—	—	—	1.8	1.3	1.3	1.8	2.6	2.6	1.8	1.1	0.8	1.0	1.2	1.2	1.1	1.3	1.9	1.6	1.0	1.2	0.8	—	—
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.1	0.9	-0.2
12th Grade, original	—	—	—	—	—	2.0	1.6	1.5	2.5	3.6	2.8	2.4	1.3	1.2	1.0	1.3	1.6	1.8	1.8	1.4	2.3	0.9	1.5	1.4	—	—
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5	1.1	-0.3
College Students																										
Original	0.2	0.4	0.3	0.2	0.7	0.7	0.8	0.8	2.1	2.5	1.5	0.7	1.0	0.7	0.8	0.6	0.4	0.6	0.5	1.0	0.7	1.4	0.8	1.4	—	—
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	0.7	-0.3
Young Adults																										
Original	0.1	0.3	0.3	0.2	0.4	0.3	0.6	0.8	1.3	1.9	1.8	1.3	0.8	0.6	0.6	0.7	0.5	0.6	0.6	0.8	0.7	1.0	1.1	1.3	—	—
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.4	0.8	-0.6

(Table continued on next page.)

TABLE 2-3 (cont.)
Trends in 30-Day Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Cocaine																										
8th Grade	0.5	0.7	0.7	1.0	1.2	1.3	1.1	1.4	1.3	1.2	1.2	1.1	0.9	0.9	1.0	1.0	0.9	0.8	0.8	0.6	0.8	0.5	0.5	0.5	0.5	0.0
10th Grade	0.7	0.7	0.9	1.2	1.7	1.7	2.0	2.1	1.8	1.8	1.3	1.6	1.3	1.7	1.5	1.5	1.3	1.2	0.9	0.9	0.7	0.8	0.8	0.6	0.8	+0.1
12th Grade	1.4	1.3	1.3	1.5	1.8	2.0	2.3	2.4	2.6	2.1	2.1	2.3	2.1	2.3	2.3	2.5	2.0	1.9	1.3	1.3	1.1	1.1	1.1	1.0	1.1	+0.1
College Students	1.0	1.0	0.7	0.6	0.7	0.8	1.6	1.6	1.2	1.4	1.9	1.6	1.9	2.4	1.8	1.8	1.7	1.2	1.3	1.0	1.2	1.1	0.9	1.8	1.5	-0.4
Young Adults	2.0	1.8	1.4	1.3	1.5	1.2	1.6	1.7	1.9	1.7	2.2	2.2	2.4	2.2	2.2	2.3	2.1	1.9	1.8	1.4	1.5	1.3	1.5	1.8	1.7	0.0
Crack [i]																										
8th Grade	0.3	0.5	0.4	0.7	0.7	0.8	0.7	0.9	0.8	0.8	0.8	0.8	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.5	0.3	0.3	0.3	0.3	0.0
10th Grade	0.3	0.4	0.5	0.6	0.9	0.8	0.9	1.1	0.8	0.9	0.7	1.0	0.7	0.8	0.7	0.7	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.3	0.3	0.0
12th Grade	0.7	0.6	0.7	0.8	1.0	1.0	0.9	1.0	1.1	1.0	1.1	1.2	0.9	1.0	1.0	0.9	0.9	0.8	0.6	0.7	0.5	0.6	0.6	0.7	0.6	-0.1
College Students	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.1	0.3	0.4	0.4	0.1	*	0.1	0.1	0.1	0.1	0.1	0.0	0.3	0.1	0.1	0.0
Young Adults	0.4	0.4	0.4	0.3	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.2	0.1	0.2	0.1	0.1	0.1	0.0	-0.1
Other Cocaine [j]																										
8th Grade	0.5	0.5	0.6	0.9	1.0	1.0	0.8	1.0	1.1	0.9	0.9	0.8	0.7	0.7	0.7	0.7	0.6	0.6	0.7	0.5	0.6	0.3	0.3	0.4	0.4	0.0
10th Grade	0.6	0.6	0.7	1.0	1.4	1.3	1.6	1.8	1.6	1.6	1.2	1.3	1.1	1.5	1.3	1.3	1.1	1.0	0.8	0.7	0.6	0.7	0.7	0.5	0.7	+0.2
12th Grade	1.2	1.0	1.2	1.3	1.3	1.6	2.0	2.0	2.5	1.7	1.8	1.9	1.8	2.2	2.0	2.4	1.7	1.7	1.1	1.1	1.0	1.0	0.9	0.9	1.1	+0.2
College Students	1.0	0.9	0.6	0.3	0.8	0.6	1.3	1.5	1.0	0.9	1.5	1.4	1.9	2.2	1.8	1.3	1.6	1.1	1.2	1.0	1.2	1.3	0.9	1.8	1.4	-0.4
Young Adults	1.8	1.7	1.1	1.0	1.3	1.1	1.5	1.5	1.6	1.5	1.8	2.0	2.1	2.1	1.9	1.9	2.0	1.7	1.6	1.5	1.4	1.3	1.3	1.8	1.6	-0.2
Heroin [k,l]																										
8th Grade	0.3	0.4	0.4	0.6	0.6	0.7	0.6	0.6	0.6	0.5	0.6	0.5	0.4	0.5	0.5	0.3	0.4	0.4	0.4	0.4	0.4	0.2	0.3	0.3	0.1	-0.1
10th Grade	0.2	0.2	0.3	0.4	0.6	0.5	0.6	0.7	0.7	0.5	0.3	0.5	0.3	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.2	-0.2
12th Grade	0.2	0.3	0.2	0.3	0.6	0.5	0.5	0.5	0.5	0.7	0.4	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.3	-0.1
College Students	0.1	*	*	*	0.1	*	0.2	0.1	0.1	0.2	0.1	*	*	0.1	0.1	0.2	0.1	*	0.1	0.0	0.0	0.1	0.2	0.0	0.0	0.0
Young Adults	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	*	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.3	0.2	0.3	+0.1
With a Needle [l]																										
8th Grade	—	—	—	—	0.4	0.5	0.4	0.5	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	-0.1
10th Grade	—	—	—	—	0.3	0.3	0.3	0.4	0.3	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.1	-0.2 sss
12th Grade	—	—	—	—	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.1	0.4	0.4	0.3	0.2	0.3	0.2	-0.1
College Students	—	—	—	—	*	*	0.1	*	0.1	0.1	*	*	0.1	0.1	0.1	0.1	*	0.0	0.1	0.0	0.0	0.2	0.1	0.0	0.0	0.0
Young Adults	—	—	—	—	*	*	0.1	*	0.1	*	0.2	*	*	0.1	0.1	0.1	*	*	0.1	0.1	0.2	0.2	0.3	0.1	0.2	+0.1

(Table continued on next page.)

TABLE 2-3 (cont.)
Trends in 30-Day Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Without a Needle [l]																										
8th Grade	—	—	—	—	0.3	0.4	0.4	0.3	0.4	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.0
10th Grade	—	—	—	—	0.3	0.3	0.4	0.5	0.5	0.4	0.2	0.4	0.2	0.3	0.3	0.3	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.0
12th Grade	—	—	—	—	0.6	0.4	0.6	0.4	0.4	0.7	0.3	0.5	0.4	0.3	0.5	0.3	0.4	0.2	0.3	0.4	0.4	0.2	0.2	0.4	0.3	-0.1
College Students	—	—	—	—	*	0.1	0.2	0.2	0.3	0.4	0.3	*	*	0.3	*	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.3	0.0	0.0	0.0
Young Adults	—	—	—	—	0.1	*	0.1	0.2	0.2	0.2	0.4	*	0.1	0.1	0.1	0.3	0.2	*	0.3	0.1	0.1	0.1	0.4	0.1	0.2	+0.1
Narcotics other than Heroin [m,n]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	1.1	1.2	1.3	1.5	1.8	2.0	2.3	2.4	2.6	2.9	3.0‡	4.0	4.1	4.3	3.9	3.8	3.8	3.8	4.1	3.6	3.6	3.0	2.8	2.2	2.1	0.0
College Students	0.6	1.0	0.7	0.4	1.2	0.7	1.3	1.1	1.0	1.7	1.7‡	3.2	2.3	3.0	3.1	3.1	2.2	2.3	2.7	2.3	2.1	2.2	1.5	1.2	1.3	+0.1
Young Adults	0.6	0.7	0.7	0.6	0.9	0.7	0.9	0.9	1.2	1.4	1.7‡	2.9	2.9	3.0	3.5	3.2	3.4	3.6	3.2	3.4	2.9	2.7	2.6	2.1	1.8	-0.3
Amphetamines [m,o]																										
8th Grade	2.6	3.3	3.6	3.6	4.2	4.6	3.8	3.3	3.4	3.4	3.2	2.8	2.7	2.3	2.3	2.1	2.0	2.2	1.9	1.8	1.8	1.3‡	2.3	2.1	1.9	-0.2
10th Grade	3.3	3.6	4.3	4.5	5.3	5.5	5.1	5.1	5.0	5.4	5.6	5.2	4.3	4.0	3.7	3.5	4.0	2.8	3.3	3.3	3.1	2.8‡	3.3	3.7	3.1	-0.6 s
12th Grade	3.2	2.8	3.7	4.0	4.0	4.1	4.8	4.6	4.5	5.0	5.6	5.5	5.0	4.6	3.9	3.7	3.7	2.9	3.0	3.3	3.7	3.3‡	4.2	3.8	3.2	-0.6
College Students	1.0	1.1	1.5	1.5	2.2	0.9	2.1	1.7	2.3	2.9	3.3	3.0	3.1	3.2	2.9	2.5	3.1	2.8	3.4	4.1	4.5	4.6‡	5.0	4.8	4.2	-0.6
Young Adults	1.5	1.5	1.5	1.7	1.7	1.5	1.7	1.7	1.9	2.3	2.4	2.5	2.5	2.4	2.1	2.2	2.3	2.2	2.5	2.9	3.0	3.2‡	3.0	3.5	3.1	-0.4
Methamphetamine [p,q]																										
8th Grade	—	—	—	—	—	—	—	—	1.1	0.8	1.3	1.1	1.2	0.6	0.7	0.6	0.6	0.7	0.5	0.7	0.4	0.5	0.4	0.2	0.3	+0.1
10th Grade	—	—	—	—	—	—	—	—	1.8	2.0	1.5	1.8	1.4	1.3	1.1	0.7	0.4	0.7	0.6	0.7	0.5	0.6	0.4	0.3	0.3	0.0
12th Grade	—	—	—	—	—	—	—	—	1.7	1.9	1.5	1.7	1.7	1.4	0.9	0.9	0.6	0.6	0.5	0.5	0.6	0.5	0.4	0.5	0.4	-0.1
College Students	—	—	—	—	—	—	—	—	1.2	0.2	0.5	0.2	0.6	0.2	0.1	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.3	+0.2
Young Adults	—	—	—	—	—	—	—	—	0.8	0.7	1.0	1.0	0.7	0.6	0.7	0.5	0.6	0.3	0.3	0.2	0.3	0.4	0.2	0.3	0.0	-0.3 s
Crystal Methamphetamine (Ice) [q]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	0.6	0.5	0.6	0.7	1.1	1.1	0.8	1.2	0.8	1.0	1.1	1.2	0.8	0.8	0.9	0.7	0.6	0.6	0.5	0.6	0.6	0.4	0.8	0.4	0.3	-0.1
College Students	*	*	0.3	0.5	0.3	0.1	0.2	0.3	*	*	0.1	*	0.3	0.1	0.2	*	0.1	0.0	0.0	0.2	0.0	0.3	0.0	0.0	0.0	0.0
Young Adults	*	0.1	0.3	0.5	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.4	0.6	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.4	0.1	0.3	+0.2

(Table continued on next page.)

TABLE 2-3 (cont.)
Trends in 30-Day Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Sedatives (Barbiturates) [m,r]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	1.4	1.1	1.3	1.7	2.2	2.1	2.1	2.6	2.6	3.0	2.8	3.2	2.9‡	2.9	3.3	3.0	2.7	2.8	2.5	2.2	1.8	2.0	2.2	2.0	1.7	-0.3
College Students	0.3	0.7	0.4	0.4	0.5	0.8	1.2	1.1	1.1	1.1	1.5	1.7	1.7	1.5	1.3	1.3	1.4	1.4	1.2	0.6	0.8	0.8‡	0.9	0.7	1.0	+0.3
Young Adults	0.5	0.5	0.6	0.6	0.8	0.8	0.9	0.9	1.1	1.3	1.7	1.5	1.5	1.8	1.7	1.5	1.6	1.9	1.2	1.1	1.1	1.1‡	1.2	1.0	0.9	-0.1
Tranquilizers [b,m]																										
8th Grade	0.8	0.8	0.9	1.1	1.2	1.5	1.2	1.2	1.1	1.4‡	1.2	1.2	1.4	1.2	1.3	1.3	1.1	1.2	1.2	1.2	1.0	0.8	0.9	0.8	0.8	-0.1
10th Grade	1.2	1.5	1.1	1.5	1.7	1.7	2.2	2.2	2.2	2.5‡	2.9	2.9	2.4	2.3	2.3	2.4	2.6	1.9	2.0	2.2	1.9	1.7	1.6	1.6	1.7	+0.2
12th Grade	1.4	1.0	1.2	1.4	1.8	2.0	1.8	2.4	2.5	2.6‡	2.9	3.3	2.8	3.1	2.9	2.7	2.6	2.6	2.7	2.5	2.3	2.1	2.0	2.1	2.0	-0.1
College Students	0.6	0.6	0.4	0.4	0.5	0.7	1.2	1.3	1.1	2.0‡	1.5	3.0	2.8	2.7	2.2	2.1	1.8	1.6	2.2	1.3	1.6	1.1	1.2	1.7	1.6	-0.1
Young Adults	0.9	1.0	1.0	0.8	1.1	0.7	1.1	1.2	1.3	1.8‡	2.1	2.8	2.4	2.7	2.6	2.3	2.8	2.7	2.8	2.2	2.3	1.9	1.9	1.9	1.7	-0.2
Any Prescription Drug [o,t]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.6	8.1	7.8	7.2	7.3	6.9	7.2	7.0‡	7.1	6.4	5.9	-0.5
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rohypnol [u]																										
8th Grade	—	—	—	—	—	0.5	0.3	0.4	0.3	0.3	0.4	0.2	0.1	0.2	0.2	0.4	0.3	0.1	0.2	0.2	0.6	0.1	0.1	0.2	0.1	-0.1
10th Grade	—	—	—	—	—	0.5	0.5	0.4	0.5	0.4	0.2	0.4	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.1	0.4	0.1	-0.3
12th Grade	—	—	—	—	—	0.5	0.3	0.3	0.3	0.4	0.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Alcohol [v]																										
Any Use																										
8th Grade	25.1	26.1‡	24.3	25.5	24.6	26.2	24.5	23.0	24.0	22.4	21.5	19.6	19.7	18.6	17.1	17.2	15.9	15.9	14.9	13.8	12.7	11.0	10.2	9.0	9.7	+0.7
10th Grade	42.8	39.9‡	38.2	39.2	38.8	40.4	40.1	38.8	40.0	41.0	39.0	35.4	35.4	35.2	33.2	33.8	33.4	28.8	30.4	28.9	27.2	27.6	25.7	23.5	21.5	-2.0
12th Grade	54.0	51.3‡	48.6	50.1	51.3	50.8	52.7	52.0	51.0	50.0	49.8	48.6	47.5	48.0	47.0	45.3	44.4	43.1	43.5	41.2	40.0	41.5	39.2	37.4	35.3	-2.1
College Students	74.7	71.4	70.1	67.8	67.5	67.0	65.8	68.1	69.6	67.4	67.0	68.9	66.2	67.7	67.9	65.4	66.6	69.0	65.8	65.0	63.5	67.7	63.1	63.1	63.2	+0.1
Young Adults	70.6	69.0	68.3	67.7	68.1	66.7	67.5	66.9	68.2	66.8	67.0	68.3	67.0	68.4	68.6	68.7	69.5	68.9	69.4	68.4	68.8	69.5	68.7	68.4	66.9	-1.5

(Table continued on next page.)

TABLE 2-3 (cont.)
Trends in 30-Day Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Been Drunk [w]																										
8th Grade	7.6	7.5	7.8	8.7	8.3	9.6	8.2	8.4	9.4	8.3	7.7	6.7	6.7	6.2	6.0	6.2	5.5	5.4	5.4	5.0	4.4	3.6	3.5	2.7	3.1	+0.3
10th Grade	20.5	18.1	19.8	20.3	20.8	21.3	22.4	21.1	22.5	23.5	21.9	18.3	18.2	18.5	17.6	18.8	18.1	14.4	15.5	14.7	13.7	14.5	12.8	11.2	10.3	-1.0
12th Grade	31.6	29.9	28.9	30.8	33.2	31.3	34.2	32.9	32.9	32.3	32.7	30.3	30.9	32.5	30.2	30.0	28.7	27.6	27.4	26.8	25.0	28.1	26.0	23.5	20.6	-2.9 s
College Students	45.0	45.0	43.8	42.8	37.9	40.3	46.4	44.3	44.6	43.9	44.7	44.4	40.4	47.4	43.1	47.6	46.8	45.3	42.4	43.6	39.9	40.1	40.2	42.6	38.4	-4.2
Young Adults	35.4	35.6	34.2	34.3	33.0	33.2	35.6	34.2	37.7	35.7	36.8	37.1	37.8	39.0	39.0	42.1	41.4	40.7	40.5	39.4	39.5	39.1	37.7	39.3	34.2	-5.1 sss
Flavored Alcoholic Beverages [g,p]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	14.6	12.9	13.1	12.2	10.2	9.5	9.4	8.6	7.6	6.3	5.7	5.5	-0.2
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	25.1	23.1	24.7	21.8	20.2	19.0	19.4	15.8	16.3	15.5	14.0	12.8	-1.2
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	31.1	30.5	29.3	29.1	27.4	27.4	24.1	23.1	21.8	21.0	19.9	20.8	+0.9
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	34.1	30.9	26.2	27.5	35.8	32.3	31.5	29.5	31.3	29.1	32.9	30.5	-2.4
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	29.5	27.6	24.9	25.9	26.7	24.4	24.5	23.8	26.1	25.4	26.9	24.7	-2.2
Cigarettes Any Use																										
8th Grade	14.3	15.5	16.7	18.6	19.1	21.0	19.4	19.1	17.5	14.6	12.2	10.7	10.2	9.2	9.3	8.7	7.1	6.8	6.5	7.1	6.1	4.9	4.5	4.0	3.6	-0.4
10th Grade	20.8	21.5	24.7	25.4	27.9	30.4	29.8	27.6	25.7	23.9	21.3	17.7	16.7	16.0	14.9	14.5	14.0	12.3	13.1	13.6	11.8	10.8	9.1	7.2	6.3	-0.8
12th Grade	28.3	27.8	29.9	31.2	33.5	34.0	36.5	35.1	34.6	31.4	29.5	26.7	24.4	25.0	23.2	21.6	21.6	20.4	20.1	19.2	18.7	17.1	16.3	13.6	11.4	-2.2 ss
College Students	23.2	23.5	24.5	23.5	26.8	27.9	28.3	30.0	30.6	28.2	25.7	26.7	22.5	24.3	23.8	19.2	19.9	17.9	17.9	16.4	15.2	12.5	14.0	12.9	11.3	-1.6
Young Adults	28.2	28.3	28.0	28.0	29.2	30.1	29.9	30.9	30.3	30.1	30.2	29.2	28.4	29.2	28.6	27.0	26.2	24.6	23.3	22.4	21.3	19.7	20.0	17.5	16.6	-0.9
Smokeless Tobacco [x]																										
8th Grade	6.9	7.0	6.6	7.7	7.1	7.1	5.5	4.8	4.5	4.2	4.0	3.3	4.1	4.1	3.3	3.7	3.2	3.5	3.7	4.1	3.5	2.8	2.8	3.0	3.2	+0.2
10th Grade	10.0	9.6	10.4	10.5	9.7	8.6	8.9	7.5	6.5	6.1	6.9	6.1	5.3	4.9	5.6	5.7	6.1	5.0	6.5	7.5	6.6	6.4	6.4	5.3	4.9	-0.4
12th Grade	—	11.4	10.7	11.1	12.2	9.8	9.7	8.8	8.4	7.6	7.8	6.5	6.7	6.7	7.6	6.1	6.6	6.5	8.4	8.5	8.3	7.9	8.1	8.4	6.1	-2.3 s
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Electronic Vaporizers [jj]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.0	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.2	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16.3	—
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.8	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.2	—

(Table continued on next page.)

TABLE 2-3 (cont.)
Trends in 30-Day Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Large Cigars [ii]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.9	2.4	+0.5
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.9	3.4	-0.6
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.4	7.0	+0.6
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.4	4.9	-3.5
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.6	5.9	-0.7
Flavored Little Cigars [ii]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.1	4.1	0.0
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.9	6.1	-0.8
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.9	11.4	-0.5
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.8	5.6	-4.2
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.9	6.9	0.0
Regular Little Cigars [ii]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.5	3.3	+0.8
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.4	3.8	-0.6
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.0	7.8	+0.9
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.6	4.1	-4.5
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.8	3.8	-2.0
Steroids [y,z]																										
8th Grade	0.4	0.5	0.5	0.5	0.6	0.4	0.5	0.5	0.7	0.8	0.7	0.8	0.7	0.5	0.5	0.5	0.4	0.5	0.4	0.3	0.4	0.3	0.3	0.2	0.3	0.0
10th Grade	0.6	0.6	0.5	0.6	0.6	0.5	0.7	0.6	0.9	1.0	0.9	1.0	0.8	0.8	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	-0.1
12th Grade	0.8	0.6	0.7	0.9	0.7	0.7	1.0	1.1	0.9	0.8	1.3	1.4	1.3	1.6	0.9	1.1	1.0	1.0	1.0	1.1	0.7	0.9	1.0	0.9	1.0	+0.1
College Students	0.3	0.2	0.2	0.2	0.1	*	0.2	0.2	0.4	*	0.3	*	0.1	*	*	*	0.1	*	0.2	0.0	0.2	0.0	0.0	0.0	0.3	+0.3
Young Adults	0.2	0.1	*	0.1	0.2	0.2	0.2	0.2	0.3	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.4	0.2	0.3	0.5	0.2	0.1	0.1	0.3	0.1	-0.2
Previously surveyed drugs that have been dropped																										
Nitrites [e]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	0.4	0.3	0.6	0.4	0.4	0.7	0.7	1.0	0.4	0.3	0.5	0.6	0.7	0.7	0.5	0.3	0.5	0.3	0.6	—	—	—	—	—	—	—
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	*	0.1	0.2	0.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

(Table continued on next page.)

TABLE 2-3 (cont.)
Trends in 30-Day Prevalence of Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Methaqualone [m,s]																										
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	0.2	0.4	0.1	0.4	0.4	0.6	0.3	0.6	0.4	0.2	0.5	0.3	0.4	0.5	0.5	0.4	0.4	0.2	0.3	0.2	0.2	0.3	—	—	—	—
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Source. The Monitoring the Future study, the University of Michigan.

See footnotes following Table 2-4.

TABLE 2-4

Trends in 30-Day Prevalence of Daily Use of Various Drugs for 8th, 10th, and 12th Graders, College Students, and Young Adults (Ages 19–28)

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Marijuana/Hashish Daily [gg]																										
8th Grade	0.2	0.2	0.4	0.7	0.8	1.5	1.1	1.1	1.4	1.3	1.3	1.2	1.0	0.8	1.0	1.0	0.8	0.9	1.0	1.2	1.3	1.1	1.1	1.0	1.1	+0.1
10th Grade	0.8	0.8	1.0	2.2	2.8	3.5	3.7	3.6	3.8	3.8	4.5	3.9	3.6	3.2	3.1	2.8	2.8	2.7	2.8	3.3	3.6	3.5	4.0	3.4	3.0	-0.4
12th Grade	2.0	1.9	2.4	3.6	4.6	4.9	5.8	5.6	6.0	6.0	5.8	6.0	6.0	5.6	5.0	5.0	5.1	5.4	5.2	6.1	6.6	6.5	6.5	5.8	6.0	+0.2
College Students	1.8	1.6	1.9	1.8	3.7	2.8	3.7	4.0	4.0	4.6	4.5	4.1	4.7	4.5	4.0	4.3	3.5	3.9	4.9	4.4	4.7	4.8	5.1	5.9	4.6	-1.3
Young Adults	2.3	2.3	2.4	2.8	3.3	3.3	3.8	3.7	4.4	4.2	5.0	4.5	5.3	5.0	4.9	5.0	5.0	5.1	5.4	5.3	6.1	5.6	6.2	6.9	6.8	-0.2
Alcohol [v,gg]																										
Any Daily Use																										
8th Grade	0.5	0.6‡	1.0	1.0	0.7	1.0	0.8	0.9	1.0	0.8	0.9	0.7	0.8	0.6	0.5	0.5	0.6	0.7	0.5	0.5	0.4	0.3	0.3	0.3	0.2	-0.1
10th Grade	1.3	1.2‡	1.8	1.7	1.7	1.6	1.7	1.9	1.9	1.8	1.9	1.8	1.5	1.3	1.3	1.4	1.4	1.0	1.1	1.1	0.8	1.0	0.9	0.8	0.5	-0.3 ss
12th Grade	3.6	3.4‡	3.4	2.9	3.5	3.7	3.9	3.9	3.4	2.9	3.6	3.5	3.2	2.8	3.1	3.0	3.1	2.8	2.5	2.7	2.1	2.5	2.2	1.9	1.9	0.0
College Students	4.1	3.7	3.9	3.7	3.0	3.2	4.5	3.9	4.5	3.6	4.7	5.0	4.3	3.7	4.6	4.8	4.3	4.0	4.3	3.6	3.8	3.9	3.6	4.3	3.1	-1.2
Young Adults	4.9	4.5	4.5	3.9	3.9	4.0	4.6	4.0	4.8	4.1	4.4	4.7	5.1	4.5	5.2	5.4	5.6	5.3	5.3	4.6	5.2	5.5	5.1	5.0	4.7	-0.3
Been Drunk Daily [w,gg]																										
8th Grade	0.1	0.1	0.2	0.3	0.2	0.2	0.2	0.3	0.4	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	-0.1
10th Grade	0.2	0.3	0.4	0.4	0.6	0.4	0.6	0.6	0.7	0.5	0.6	0.5	0.5	0.4	0.4	0.5	0.5	0.3	0.4	0.3	0.2	0.4	0.3	0.3	0.1	-0.1 s
12th Grade	0.9	0.8	0.9	1.2	1.3	1.6	2.0	1.5	1.9	1.7	1.4	1.2	1.6	1.8	1.5	1.6	1.3	1.4	1.1	1.6	1.3	1.5	1.3	1.1	0.8	-0.4
College Students	0.5	0.2	0.3	0.8	0.5	0.1	1.3	0.8	1.0	0.7	0.5	0.8	1.1	0.8	0.5	0.6	0.7	0.5	0.7	0.3	1.3	0.4	0.5	0.4	0.7	+0.3
Young Adults	0.5	0.4	0.4	0.5	0.3	0.4	0.9	0.5	0.9	0.5	0.4	0.6	0.8	0.7	0.5	0.6	0.6	0.5	1.0	0.7	0.7	0.4	0.5	0.6	0.4	-0.2
5+ Drinks in a Row in Last 2 Weeks																										
8th Grade	10.9	11.3	11.3	12.1	12.3	13.3	12.3	11.5	13.1	11.7	11.0	10.3	9.8	9.4	8.4	8.7	8.3	8.1	7.8	7.2	6.4	5.1	5.1	4.1	4.6	+0.5
10th Grade	21.0	19.1	21.0	21.9	22.0	22.8	23.1	22.4	23.5	24.1	22.8	20.3	20.0	19.9	19.0	19.9	19.6	16.0	17.5	16.3	14.7	15.6	13.7	12.6	10.9	-1.7 s
12th Grade	29.8	27.9	27.5	28.2	29.8	30.2	31.3	31.5	30.8	30.0	29.7	28.6	27.9	29.2	27.1	25.4	25.9	24.6	25.2	23.2	21.6	23.7	22.1	19.4	17.2	-2.2 s
College Students	42.8	41.4	40.2	40.2	38.6	38.3	40.7	38.9	40.0	39.3	40.9	40.1	38.5	41.7	40.1	40.2	41.1	40.0	36.9	37.0	36.1	37.4	35.2	35.4	31.9	-3.6
Young Adults	34.7	34.2	34.4	33.7	32.6	33.6	34.4	34.1	35.8	34.7	35.9	35.9	35.8	37.1	37.0	37.6	37.8	37.9	36.7	35.9	36.5	35.5	35.1	33.5	31.9	-1.6
Cigarettes																										
Any Daily Use																										
8th Grade	7.2	7.0	8.3	8.8	9.3	10.4	9.0	8.8	8.1	7.4	5.5	5.1	4.5	4.4	4.0	4.0	3.0	3.1	2.7	2.9	2.4	1.9	1.8	1.4	1.3	-0.1
10th Grade	12.6	12.3	14.2	14.6	16.3	18.3	18.0	15.8	15.9	14.0	12.2	10.1	8.9	8.3	7.5	7.6	7.2	5.9	6.3	6.6	5.5	5.0	4.4	3.2	3.0	-0.2
12th Grade	18.5	17.2	19.0	19.4	21.6	22.2	24.6	22.4	23.1	20.6	19.0	16.9	15.8	15.6	13.6	12.2	12.3	11.4	11.2	10.7	10.3	9.3	8.5	6.7	5.5	-1.2 s
College Students	13.8	14.1	15.2	13.2	15.8	15.9	15.2	18.0	19.3	17.8	15.0	15.9	13.8	13.8	12.4	9.2	9.3	9.2	8.0	7.6	7.3	5.2	5.6	5.2	4.2	-1.0
Young Adults	21.7	20.9	20.8	20.7	21.2	21.8	20.6	21.9	21.5	21.8	21.2	21.2	20.3	20.8	19.6	18.6	17.3	16.7	15.0	14.8	13.8	12.8	12.1	10.7	9.7	-1.1
1/2 Pack+/Day																										
8th Grade	3.1	2.9	3.5	3.6	3.4	4.3	3.5	3.6	3.3	2.8	2.3	2.1	1.8	1.7	1.7	1.5	1.1	1.2	1.0	0.9	0.7	0.6	0.7	0.5	0.4	-0.1
10th Grade	6.5	6.0	7.0	7.6	8.3	9.4	8.6	7.9	7.6	6.2	5.5	4.4	4.1	3.3	3.1	3.3	2.7	2.0	2.4	2.4	1.9	1.5	1.5	1.2	1.0	-0.2
12th Grade	10.7	10.0	10.9	11.2	12.4	13.0	14.3	12.6	13.2	11.3	10.3	9.1	8.4	8.0	6.9	5.9	5.7	5.4	5.0	4.7	4.3	4.0	3.4	2.6	2.1	-0.5
College Students	8.0	8.9	8.9	8.0	10.2	8.4	9.1	11.3	11.0	10.1	7.8	7.9	7.6	6.8	6.7	4.9	4.3	4.3	3.8	3.9	2.5	2.4	2.4	2.4	1.4	-1.1
Young Adults	16.0	15.7	15.5	15.3	15.7	15.3	14.6	15.6	15.1	15.1	14.6	14.2	13.9	13.5	12.5	11.9	11.1	10.2	9.3	9.3	7.5	7.6	7.0	6.6	5.7	-0.9
Smokeless Tobacco Daily [x]																										
8th Grade	1.6	1.8	1.5	1.9	1.2	1.5	1.0	1.0	0.9	0.9	1.2	0.8	0.8	1.0	0.7	0.7	0.8	0.8	0.8	0.9	0.8	0.5	0.5	0.5	0.8	+0.2
10th Grade	3.3	3.0	3.3	3.0	2.7	2.2	2.2	2.2	1.5	1.9	2.2	1.7	1.8	1.6	1.9	1.7	1.6	1.4	1.9	2.5	1.7	2.0	1.9	1.8	1.6	-0.2
12th Grade	—	4.3	3.3	3.9	3.6	3.3	4.4	3.2	2.9	3.2	2.8	2.0	2.2	2.8	2.5	2.2	2.8	2.7	2.9	3.1	3.1	3.2	3.0	3.4	2.9	-0.4
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Source. The Monitoring the Future study, the University of Michigan.

See footnotes on the next page.

Footnotes for Tables 2-1 through 2-4

Notes. Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. ' — ' indicates data not available." * ' indicates less than 0.05% but greater than 0%. ' ‡ ' indicates that the question changedthe following year. See relevant footnote for that drug. See relevant figure to assess the impact of the wording changes. Any apparent inconsistency between the change estimate and the prevalenceestimates for the two most recent years is due to rounding.

Approximate Weighted *N*s	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
8th Graders	17,500	18,600	18,300	17,300	17,500	17,800	18,600	18,100	16,700	16,700	16,200	15,100	16,500
10th Graders	14,800	14,800	15,300	15,800	17,000	15,600	15,500	15,000	13,600	14,300	14,000	14,300	15,800
12th Graders	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800	12,900	14,600
College Students	1,410	1,490	1,490	1,410	1,450	1,450	1,480	1,440	1,440	1,350	1,340	1,260	1,270
Young Adults	6,600	6,800	6,700	6,500	6,400	6,300	6,400	6,200	6,000	5,700	5,800	5,300	5,300

Approximate Weighted *N*s	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
8th Graders	17,000	16,800	16,500	16,100	15,700	15,000	15,300	16,000	14,600	14,600	14,600	14,400
10th Graders	16,400	16,200	16,200	16,100	15,100	15,900	15,200	14,900	12,900	12,900	13,000	15,600
12th Graders	14,600	14,700	14,200	14,500	14,000	13,700	14,400	14,100	12,600	12,600	12,400	12,400
College Students	1,400	1,360	1,280	1,250	1,270	1,320	1,260	1,230	1,150	1,090	1,030	1,020
Young Adults	5,700	5,400	5,100	4,800	4,900	4,900	4,900	4,630	4,580	4,360	4,210	3,990

[a]For 12th graders, college students, and young adults only: Use of any illicit drug includes any use of marijuana, LSD, other hallucinogens, crack, other cocaine, or heroin; or any use of narcotics other than heroin, amphetamines, sedatives (barbiturates), or tranquilizers not under a doctor's orders. For 8th and 10th graders only: The use of narcotics other than heroin and sedatives (barbiturates) has been excluded because these younger respondents appear to overreport use (perhaps because they include the use of nonprescription drugs in their answers). Due to changes in the amphetamines questions 2013 data for any illicit drug and any illicit drug other than marijuana are based on half the *N* indicated. For any illicit drug including inhalants, 8th and 10th grades, college students, and young adults are based on one half the N indicated for 2013; 12th graders are based on one sixth of *N* indicated in 2013.

[b]In 2001 the question text was changed on half of the questionnaire forms for each age group. Other psychedelics was changed to other hallucinogens and shrooms was added to the list of examples. For the tranquilizer list of examples, Miltown was replaced with Xanax. For 8th, 10th, and 12th graders only: The 2001 data presented here are based on the changed forms only; *N* is one half of *N* indicated. In 2002 the remaining forms were changed to the new wording. The data are based on all forms beginning in 2002. Data for any illicit drug other than marijuana and data for hallucinogens are also affected by these changes and have been handled in a parallel manner. Beginning in 2014 LSD and hallucinogens other than LSD based on five of six forms; *N* is five sixths of *N* indicated. Hallucinogens was also effected by this change.

[c]For 12th graders, college students, and young adults only: Data based on five of six forms in 1991–1998; *N* is five sixths of *N* indicated. Data based on three of six forms beginning in 1999; *N* is three sixths of *N* indicated.

[d]Inhalants are unadjusted for underreporting of amyl and butyl nitrites.

[e]For 12th graders and young adults only: Data based on one of six forms; *N* is one sixth of *N* indicated. Questions about nitrite use were dropped from the young adult questionnaires in 1995 and from the 12th-grade questionnaires in 2010.

[f]Hallucinogens are unadjusted for underreporting of PCP.

[g]For 12th graders, college students, and young adults only: Data based on one of six forms; *N* is one sixth of *N* indicated. For 12th graders only: In 2011 the flavored alcoholic beverage question text was changed. Skyy Blue and Zima were removed from the list of examples. An examination of the data did not show any effect from the wording change. In 2014 the PCP triplet was dropped from one form and replaced with a single annual use question in a different form.

(Footnotes continued on next page.)

Footnotes for Tables 2-1 through 2-4 (cont.)

[h]For 8th and 10th graders only: Data based on one of two forms in 1996; *N* is one half of *N* indicated. Data based on one third of *N* indicated in 1997–2001 due to changes in the questionnaire forms. Data based on two of four forms beginning in 2002; *N* is one half of *N* indicated. For 12th graders only: Data based on one of six forms in 1996–2001; *N* is one sixth of *N* indicated. Data based on two of six forms beginning in 2002; *N* is two sixths of *N* indicated. For college students and young adults only: Data based on two of six forms in 1991–2001; *N* is two sixths of *N* indicated. Data based on three of six forms beginning in 2002; *N* is three sixths of *N* indicated. For all levels: In 2014 a revised question on use of ecstasy (MDMA) including "Molly" was added to one form at each level. The 2013 and 2014 "Original wording" data reported here are for only the questionnaires using the original question wording. The 2014 and 2015 data reported here are for only the questionnaires using the "Revised wording" which includes "Molly." For 8th and 10th grades the "Original wording" data are based on two of four forms in 2013 and 2014, *N* is one half of *N* indicated; the "Revised wording" data are based on one of four forms in 2014, *N* is one third of *N* indicated and based on three of four forms in 2015, *N* is five sixths of *N* indicated. For 12th grade the "Original wording" data are based on two of six forms in 2013 and 2014, *N* is two sixths of *N* indicated; the "Revised wording" data are based on one of four forms in 2014, *N* is one sixth of *N* indicated and based on three of six forms in 2015, *N* is three sixths of *N* indicated. For college students and young adults the "Original wording" data are based on three of six forms in 2013 and 2014, *N* is three sixths of *N* indicated; the "Revised wording" data are based on one of six forms in 2014, *N* is one sixth of *N* indicated and based on four of six forms in 2015, *N* is four sixths of N indicated.

[i]For college students and young adults only: Data based on five of six forms beginning in 2002; *N* is five sixths of *N* indicated.

[j]For 12th graders only: Data based on four of six forms; *N* is four sixths of *N* indicated. For college students and young adults only: Data based on four of six forms; *N* is four sixths of *N* indicated.

[k]In 1995, the heroin question was changed in one of two forms for 8th and 10th graders, in three of six forms for 12th graders, and in two of six forms for college students and young adults. Separate questions were asked for use with and without injection. In 1996, the heroin question was changed in all remaining 8th- and 10th-grade forms. Data presented here represent the combined data from all forms. For 8th and 10th graders only: Beginning in 2015 data based on three of four four forms; *N* is two thirds of *N* indicated.

[l]For 8th and 10th graders only: Data based on one of two forms in 1995; *N* is one half of *N* indicated. Data based on all forms beginning in 1996. For 12th graders only: Data based on three of six forms; *N* is three sixths of *N* indicated. For college students and young adults only: Data based on two of six forms; *N* is two sixths of *N* indicated.

[m]Only drug use not under a doctor's orders is included here.

[n]For 12th graders, college students, and young adults only: In 2002 the question text was changed in half of the questionnaire forms. The list of examples of narcotics other than heroin was updated: Talwin, laudanum, and paregoric—all of which had negligible rates of use by 2001—were replaced with Vicodin, OxyContin, and Percocet. The 2002 data presented here are based on the changed forms only; *N* is one half of *N* indicated. In 2003, the remaining forms were changed to the new wording. The data are based on all forms beginning in 2003. In 2013 the list of examples was changed on one form: MS Contin, Roxycodone, Hydrocodone (Lortab, Lorcet, Norco), Suboxone, Tylox, and Tramadol were added to the list. An examination of the data did not show any affect from the wording change.

[o]For 8th, 10th, and 12th graders: In 2009, the question text was changed slightly in half of the forms. An examination of the data did not show any effect from the wording change. In 2010 the remaining forms were changed in a like manner. In 2011 the question text was changed slightly in one form; bennies, Benzedrine and Methadrine were dropped from the list of examples. An examination of the data did not show any effect from the wording change. In 2013 the question wording was changed slightly in two of the 8th and 10th grade questionnaires and in three of the 12th grade questionnaires. The new wording in 2013 asked "On how many occasions (if any) have taken amphetamines or other prescription stimulant drugs…" In contrast, the old wording did not include the text highlighted in red. Results in 2013 indicated higher prevalence in questionnaires with the new wording as compared to the old wording; it was proportionally 61% higher in 8th grade, 34% higher in 10th grade, and 21% higher in 12th grade. 2013 data are based on the changed forms only; for 8th, 10th, and 12th graders *N* is one half of *N* indicated. In 2014 all questionnaires included the new, updated wording.

[p]For 8th and 10th graders only: Data based on one of four forms; *N* is one third of *N* indicated. In 2011 the flavored alcoholic beverage question text was changed. Skyy Blue and Zima were removed from the list of examples. An examination of the data did not show any effect from the wording change.

[q]For 12th graders only: Data based on two of six forms; *N* is two sixths of *N* indicated. Provigil was dropped from the study in 2012. For college students and young adults only: Beginning in 2009 Salvia data based on one of six forms; *N* is one sixth of *N* indicated. Data based on two of six forms in 2010 and 2011; *N* is two sixths of *N* indicated. Data based on three of six forms beginning in 2012; *N* is three sixths of *N* indicated. For Synthetic Marijuana data based on two of six forms in 2011; *N* is two sixths of *N* indicated. Data based on three of six forms beginning in 2012; *N* is three sixths of *N* indicated. For Bath Salts data based on three of six forms; *N* is three sixths of *N* indicated.

(Footnotes continued on next page.)

Footnotes for Tables 2-1 through 2-4 (cont.)

[r]For 12th graders only: In 2004 the question text was changed in half of the questionnaire forms. Barbiturates was changed to sedatives, including barbiturates. Goofballs, yellows, reds, blues, and rainbows were deleted from the list of examples; Phenobarbital, Tuinal, Nembutal, and Seconal were added. An examination of the data did not show any effect from the wording change. In 2005 the remaining forms were changed in a like manner. In 2013 the question text was changed in all forms: Tuinal, Nembutal, and Seconal were replaced with Ambien, Lunesta, and Sonata. In one form the list of examples was also changed: Tuinal was dropped from the list and Dalmane, Restoril, Halcion, Intermezzo, and Zolpimist were added. An examination of the data did not show any effect from the wording change. In 2013 the college student and young adult questionnaires were changed in a like manner. An examination of the data showed an affect from the wording change. For this reason 2012 and 2013 data are not comparable.

[s]For 12th graders only: Data based on one of six forms; *N* is one sixth of *N* indicated. Methaqualone was dropped from the study in 2013. For college students and young adults only: Data based on three of six forms from 2011-2013. *N* is three sixths of *N* indicated. Beginning in 2014, data based on 2 of 6 forms. *N* is two sixths of *N* indicated.

[t]The use of any prescription drug includes use of any of the following: amphetamines, sedatives (barbiturates), narcotics other than heroin, or tranquilizers… without a doctor telling you to use them.

[u]For 8th and 10th graders only: Data based on one of two forms in 1996; *N* is one half of *N* indicated. Data based on three of four forms in 1997–1998; *N* is two thirds of *N* indicated. Data based on two of four forms in 1999–2001; *N* is one third of *N* indicated. Data based on one of four forms beginning in 2002; *N* is one sixth of *N* indicated. For 12th graders only: Data based on one of six forms in 1996–2001; *N* is one sixth of *N* indicated. Data based on two of six forms in 2002–2009; *N* is two sixths of *N* indicated. Data for 2001 and 2002 are not comparable due to changes in the questionnaire forms. Data based on one of six forms beginning in 2010; *N* is one sixth of *N* indicated. For college students and young adults only: Data based on two of six forms; *N* is two sixths of *N* indicated.

[v]For 8th, 10th, and 12th graders only: In 1993, the question text was changed slightly in half of the forms to indicate that a drink meant more than just a few sips. The 1993 data are based on the changed forms only; *N* is one half of *N* indicated for these groups. In 1994 the remaining forms were changed to the new wording. The data are based on all forms beginning in 1994. In 2004, the question text was changed slightly in half of the forms. An examination of the data did not show any effect from the wording change. The remaining forms were changed in 2005. For college students and young adults: The revision of the question text resulted in rather little change in the reported prevalence of use. The data for all forms are used to provide the most reliable estimate of change.

[w]For all grades: In 2012 the alcoholic beverage containing caffeine (like Four Loko or Joose) question text was changed to alcoholic beverage mixed with an energy drink (like Red Bull). The data in 2011 and 2012 are not comparable due to this question change. For 12th graders only: Data based on two of six forms; *N* is two sixths of *N* indicated. For college students and young adults only: been drunk data based on three of six forms; *N* is three sixths of *N* indicated. Alcoholic beverages containing caffeine data based on two of six forms; *N* is two sixths of *N* indicated.

[x]For 8th and 10th graders only: Data based on one of two forms for 1991–1996 and on two of four forms beginning in 1997; *N* is one half of *N* indicated. For 12th graders only: Data based on one of six forms; *N* is one sixth of *N* indicated. For 8th, 10th, and 12th graders only: Snus and dissolvable tobacco were added to the list of examples in 2011. An examination of the data did not show any effect from the wording change. For college students and young adults only: Questions about smokeless tobacco use were dropped from the analyses in 1989.

[y]For 8th and 10th graders only: In 2006, the question text was changed slightly in half of the questionnaire forms. An examination of the data did not show any effect from the wording change. In 2007 the remaining forms were changed in a like manner. In 2008 the question text was changed slightly in half of the questionnaire forms An examination of the data did not show any effect from the wording change. In 2009 the remaining forms were changed in a like manner. For 12th graders only: Data based on two of six forms in 1991–2005; *N* is two sixths of *N* indicated. In 2006 a slightly altered version of the question was added to a third form. An examination of the data did not show any effect from the wording change. Data based on three of six forms beginning in 2006; *N* is three sixths of *N* indicated. In 2007 the remaining forms were changed in a like manner. In 2008 the question text was changed slightly in two of the questionnaire forms. An examination of the data did not show any effect from the wording change. In 2009 the remaining form was changed in a like manner.

[z]For college students and young adults only: Data based on two of six forms in 1990–2009; *N* is two sixths of *N* indicated. In 2008, the question text was changed slightly.

[aa]For 12th graders only: Data based on two of six forms in 2002–2005; *N* is two sixths of *N* indicated. Data based on three of six forms beginning in 2006; *N* is three sixths of *N* indicated.

[bb]For college students and young adults only: Data based on two of six forms through 2009; *N* is two sixths of *N* indicated. Data based on three of six forms beginning in 2010; *N* is three sixths of *N* indicated.

(Footnotes continued on next page.)

Footnotes for Tables 2-1 through 2-4 (cont.)

[cc]For 12th graders only: Data based on two of six forms in 2000; *N* is two sixths of *N* indicated. Data based on three of six forms in 2001; *N* is three sixths of *N* indicated. Data based on one of six forms beginning in 2002; *N* is one sixth of *N* indicated. For college students and young adults only: Data based on two of six forms; *N* is two sixths of *N* indicated. Data based on three of six forms beginning in 2010; *N* is three sixths of *N* indicated. Data based on two of six forms beginning in 2012; *N* is two sixths of *N* indicated.

[dd]For 12th graders only: Data based on two of six forms in 2000; *N* is two sixths of *N* indicated. Data based on three of six forms in 2001–2009; *N* is three sixths of *N* indicated. Data based on two of six forms beginning in 2010; *N* is two sixths of *N* indicated. For college students and young adults only: Data based on two of six forms; *N* is two sixths of *N* indicated. Data based on three of six forms beginning in 2010; *N* is three sixths of *N* indicated.

[ee]For 12th graders only: The 2003 flavored alcoholic beverage data were created by adjusting the 2004 data to reflect the observed 2003 to 2004 change in a slightly different version of the flavored alcoholic beverage question. In 2004 the original question was revised to include wine coolers among the examples—a change that had very little effect on the observed prevalence-of-use rate.

[ff]For 12th graders only: Data based on two of six forms in 2000–2008; *N* is two sixths of *N* indicated. Beginning in 2009 data based on one of six forms; *N* is one sixth of *N* indicated.

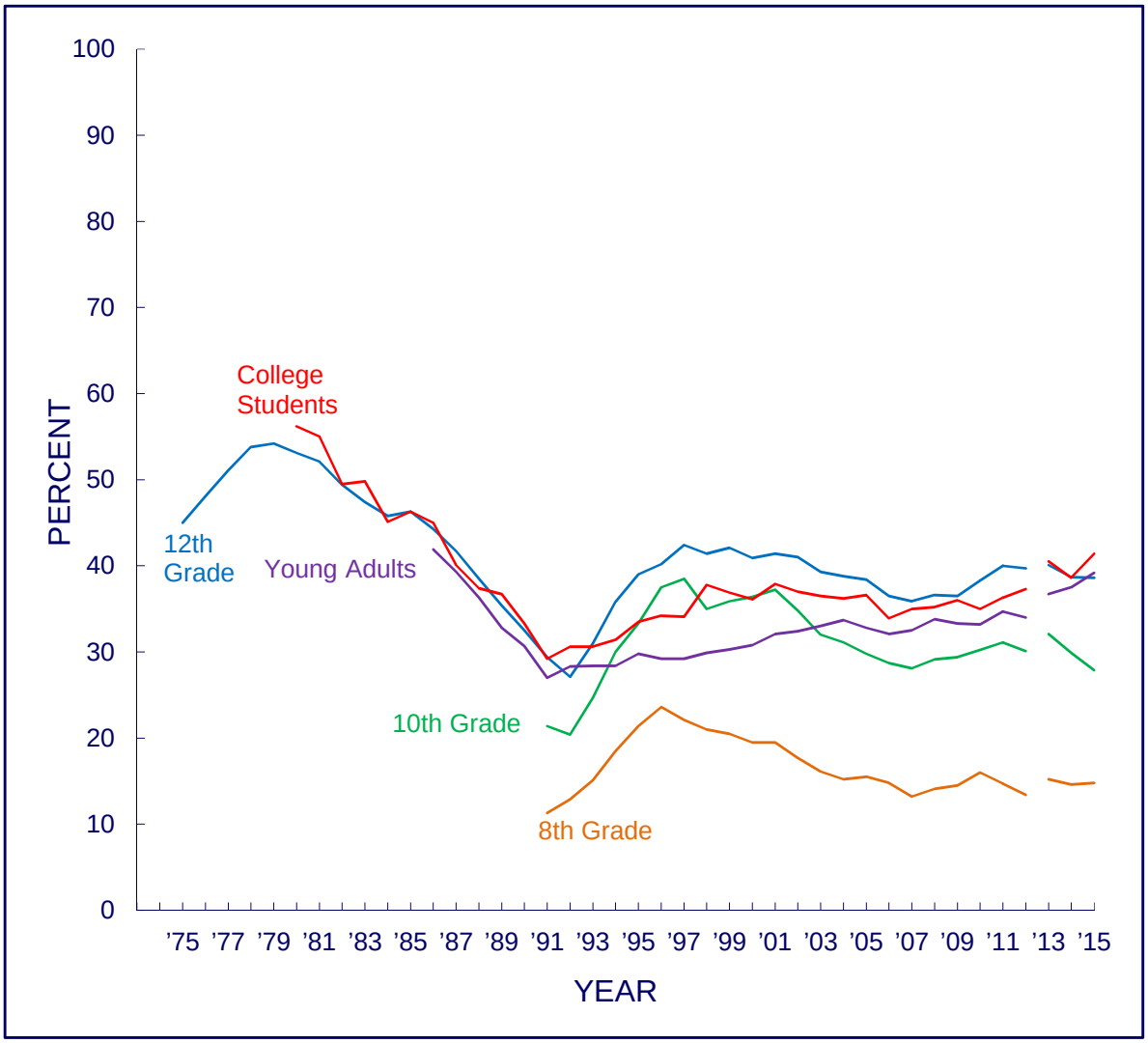
[gg]Daily use is defined as use on 20 or more occasions in the past 30 days except for cigarettes and smokeless tobacco, for which actual daily use is measured, and for 5+ drinks, for which the prevalence of having five or more drinks in a row in the last two weeks is measured.

[hh]For 8th and 10th graders only: Data based on two of four forms. *N* is one third of *N* indicated. For 12th graders only: Data based on four of six forms; *N* is four sixths of *N* indicated. For college students and young adults only: Data based on one of six forms; *N* is one sixth of *N* indicated.

[ii]For 8th and 10th graders only: Data based on two of four forms; *N* is one third of *N* indicated. For 12th graders only: Data based on two of six forms; *N* is two sixths of *N* indicated. For college students and young adults only: Data based on one of six forms; *N* is one sixth of *N* indicated.

[jj]For 8th and 10th graders only: Data based on one of four forms; *N* is one third of *N* indicated. For 12th graders only: Data based on two of six forms. *N* is two sixths of *N* indicated. For college students and young adults only: Data based on one of six forms; *N* is one sixth of *N* indicated.

FIGURE 2-1
Trends in Annual Prevalence of an Illicit Drug Use Index across 5 Populations



Source. The Monitoring the Future study, the University of Michigan.

Notes. Illicit drug use index includes any use of marijuana, LSD, other hallucinogens, crack, other cocaine, or heroin; or any use of narcotics other than heroin which is not under a doctor's orders, stimulants, sedatives (barbiturates), methaqualone (excluded since 1990), or tranquilizers. Beginning in 1982, the question about stimulant use (i.e., amphetamines) was revised to get respondents to exclude the inappropriate reporting of nonprescription stimulants. The prevalence rate dropped slightly as a result of this methodological change. In 2013, the question on use of amphetamines was changed such that "Amphetamines" was replaced with "Amphetamines and other stimulant drugs." Data for any illicit drug were affected by this change.

Chapter 3

STUDY DESIGN AND PROCEDURES

Monitoring the Future (MTF) incorporates several types of surveys into one study, yielding analytic power beyond the sum of those component parts. The components include cross-sectional studies, repeated cross-sectional studies, and panel studies of individual cohorts or sets of cohorts. The annual cross-sectional surveys provide point estimates of various behaviors and conditions in any given year for a number of subpopulations (e.g., 8th graders, 10th graders, 12th graders, college students, all young adult high school graduates ages 19–30, 35-year-olds, 40-year-olds, etc.), as well as point estimates for various subgroups within these different populations. Repeating these annual cross-sectional surveys over time allows an assessment of change across history in consistent age segments of the population, as well as among subgroups. The panel study feature permits the examination of developmental change in the same individuals as they assume adult responsibilities, enter and leave various adult roles and environments, and continue further into adulthood. It also permits an assessment of a number of outcomes later in life that may be linked to substance use in adolescence and beyond.

Finally, with a *series* of panel studies of sequential graduating class cohorts, in what is known as a cohort-sequential design, we are able to offer distinctions among and explanations for three fundamentally different types of change: period, age, and cohort. It is this feature that creates a synergistic effect in terms of analytic and explanatory power.[1,2]

RESEARCH DESIGN AND PROCEDURES FOR THE TWELFTH–GRADE SURVEYS

Twelfth graders have been surveyed in the spring of each year since 1975. Each year's data collection has taken place in between 120 and 146 public and private high schools selected to provide an accurate representative cross-section of 12th graders throughout the coterminous United States (see Figure 3-1).

The Population under Study

Senior year of high school is a strategic point at which to monitor drug use and related attitudes of youth. First, completion of high school represents the end of an important developmental period in this society, demarcating both the end of universal education and, for many, the end of living full-time in the parental home. Therefore, it is a logical point at which to take stock of cumulated influences. Further, completion of high school represents a jumping-off point—a point from which young people diverge into widely differing social environments and experiences. Thus senior year is a good time to take a "before" measure, allowing for the subsequent calculation of changes that may be attributable to the environmental transitions occurring in young adulthood, including college attendance, civilian employment, military service, and role transitions such as marriage, parenthood, divorce, etc. Finally, there are some important practical advantages built into the

[1]Bachman, J. G., Johnston, L. D., O'Malley, P. M., Schulenberg, J. E., & Miech, R. A. (2015). The Monitoring the Future project after four decades: Design and procedures (Monitoring the Future Occasional Paper No. 82). Ann Arbor, MI: Institute for Social Research, University of Michigan.

[2]For a more detailed description of the full range of research objectives of Monitoring the Future, see Johnston, L. D., O'Malley, P. M., Schulenberg, J. E., Bachman, J. G., Miech, R.A., & Patrick, M. E. (2016). *The objectives and theoretical foundation of the Monitoring the Future study* (Monitoring the Future Occasional Paper No. 84). Ann Arbor, MI: Institute for Social Research. Available at http://monitoringthefuture.org/pubs/occpapers/mtf-occ84.pdf

original system of data collections with samples of 12th graders. The need for systematically repeated, large-scale samples from which to make reliable estimates of change requires that considerable emphasis be put on cost efficiency as well as feasibility. The last year of high school constitutes the final point at which a reasonably good national sample of an age-specific cohort can be drawn and studied economically.

The Omission of Dropouts

One limitation in the MTF study design is the exclusion of individuals who drop out of high school before graduation—approximately 8–15% of each age cohort nationally, according to U.S. Census statistics. (The dropout rate has been declining in recent years; 9% is the most recent estimate.[3]) Clearly, the omission of high school dropouts introduces biases in the estimation of certain characteristics of the entire age group; however, for most purposes, the small proportion of students who drop out sets outer limits on the bias. Further, since the bias from missing dropouts should remain relatively constant from year to year, their omission should introduce little or no bias in *change* estimates. Indeed, we believe the changes observed over time for those who are surveyed in the 12th grade are likely to parallel the changes for dropouts in most instances. Appendix A in this volume addresses in detail the likely effects of the exclusion of dropouts (as well as absentees from school) on estimates of drug use prevalence and trends among the entire age cohort.

Sampling Procedures and Sample Weights

A multistage random sampling procedure is used to secure the nationwide sample of 12th graders each year. Stage 1 is the selection of particular geographic areas, Stage 2 is the selection of one or more high schools in each area (with probability proportionate to size), and Stage 3 is the selection of 12th graders within each high school. Up to about 350 twelfth graders in each school may be included. In schools with fewer 12th graders, the usual procedure is to include all of them in the data collection, though a smaller sample is sometimes taken (either by randomly sampling entire classrooms or by some other unbiased, random method) to accommodate the needs of the school. Weights are assigned to compensate for differential probabilities of selection at each stage of sampling. Final weights are normalized to average 1.0 (so that the weighted number of cases equals the unweighted number of cases overall). In order to be able to check observed trends in any given one-year interval, schools participate in the study for two consecutive years on a staggered schedule, with one half of them being replaced with a new random half-sample of schools each year. Therefore in any given year about half of the schools in the sample are participating for the first time and the other half are participating for their second and final year. This three-stage sampling procedure, with annual replacement of half of the sample of schools each year, has yielded the numbers of participating schools and students shown in Table 3-1.

Questionnaire Administration

About three weeks prior to the questionnaire administration date, parents of the target respondents are sent a letter by first-class mail, usually from the principal, announcing and describing the MTF study and providing parents with an opportunity to decline participation of their son or daughter if they wish. A flyer outlining the study in more detail is enclosed with the letter. Copies of the flyers are also given to the students by teachers in the target classrooms in advance of the date of

[3]National Center for Education Statistics. (2015). Table 219.70, Percentage of high school dropout among persons 16 through 24 years old (status dropout rate), by sex and race/ethnicity: Selected years, 1960 through 2013. *Digest of Education Statistics.* Washington, DC: NCES.

administration. The flyers make clear that participation is entirely voluntary. Local Institute for Social Research representatives and their assistants conduct the actual questionnaire administrations following standardized procedures detailed in an instruction manual. The questionnaires are administered in classrooms during a normal class period whenever possible; however, circumstances in some schools require the use of larger group administrations. Teachers are asked to remain present in the classroom to help maintain order, but to remain at their desks so that they cannot see students' answers.

Questionnaire Format

Because many questions are needed to cover all of the topic areas in the MTF study, much of the questionnaire content for 12th graders is divided into six different questionnaire forms distributed to participants in an ordered sequence that ensures six virtually identical random subsamples. (Five questionnaire forms were used between 1975 and 1988.) About one third of each form consists of key, or "core," variables common to all forms. All demographic variables are contained in this core set of measures. Key drug use variables are also in the core, while many of the specific drugs that have been added over time are not in the core set, but are in one or more forms. Many questions on attitudes, beliefs, and perceptions of relevant features of the social environment are in fewer forms, and data are thus based on fewer cases—a single form would have one fifth of the total number of cases in 1975–1988 (approximately 3,300 per year) and one sixth of the total beginning in 1989 (approximately 2,500 per year). All tables in this report list the sample sizes upon which the statistics are based, stated in terms of the weighted number of cases (which, as explained above, is roughly equivalent to the actual number of cases).

RESEARCH DESIGN AND PROCEDURES FOR THE EIGHTH- AND TENTH-GRADE SURVEYS

In 1991, MTF was expanded to include nationally representative samples of 8th- and 10th-grade students surveyed on an annual basis. Separate samples of schools and students are drawn at each grade level. In general, the procedures used for the annual in-school surveys of 8th- and 10th-grade students closely parallel those used for 12th graders, including the selection of schools and students, questionnaire administration, and questionnaire format. A major exception is that only two different questionnaire forms were used in 8th and 10th grade from 1991 to 1996, expanding to four forms beginning in 1997. The same four questionnaire forms are used for both 8th and 10th graders; most of the content is drawn from the 12th-grade surveys, including the core section. Thus, key demographic variables and measures of drug use and related attitudes and beliefs are generally identical for all three grades. Many fewer questions about other values and attitudes are included in the 8th- and 10th-grade forms, in part because we think that many of them are likely to be more fully formed by 12th grade and, therefore, are best monitored there.

About 15,000 eighth-grade students in approximately 150 schools (mostly middle schools) and about 15,000 tenth-grade students in approximately 125 schools are surveyed each year (see Table 3-1).

Mode of Administration

Since 1999 all surveys for 8th and 10th graders have been fully anonymous. In previous years MTF collected confidential, personal identification information from these respondents, and from 1991 to 1993 this information was used to follow up with 8th and 10th graders in a manner similar to that

for 12th graders.[4] These follow-ups were discontinued after 1993, precluding the need for further collection of confidential, personal identification information. Considerations supporting a switch to fully anonymous surveys in 8th and 10th grade included the following: (a) school cooperation might be easier to obtain; (b) any suppression effect on self-reported substance use that the confidential mode of administration might have could be both quantified and eliminated; and (c) if there were any mode of administration effect, it would be removed from the national data, which are widely compared with results of state and local surveys (nearly all of which use anonymous questionnaires), thus making those comparisons more valid.

MTF considered in detail the effects of an anonymous survey as compared to a confidential survey that collected personal identification information. In 1998 the half-sample of 8th and 10th grade schools beginning their two-year participation in MTF received fully anonymous questionnaires, while the half-sample participating for their second and final year continued to get the confidential questionnaires that had been previously in use by MTF since 1991.

Examination of the 1998 results, based on the two equivalent half-samples at grades 8 and 10, revealed that there was no effect of anonymous as compared to confidential surveys among 10th graders and only a very modest effect, if any, in self-reported substance use rates among 8th graders (with prevalence rates slightly higher in the anonymous condition).[5] All tables and figures in this volume combine data from both half-samples of 8th graders surveyed in a given year. This is also true for 10th graders, for whom we found no methodological effect, and 12th graders, for whom we assumed no such effect since none was found for 10th graders. (See this chapter's later section entitled "Representativeness and Sample Accuracy" for a further discussion of half-samples among all three grades.)

Questionnaire Forms and Sample Proportions

A benefit of not interlocking the 8th- and 10th-grade samples was that we could consider having more forms of the questionnaire. Beginning in 1997, the number of forms was expanded from two to four, although they are not distributed in equal numbers. Forms 1, 2, 3, and 4 are assigned to one third, one third, one sixth, and one sixth of the students, respectively. Thus, if a question appears on only one form, it is administered to either one third or one sixth of the sample. A question in two forms may be assigned to one third of the sample (one sixth plus one sixth), one half of the sample (one third plus one sixth), or two thirds of the sample (one third plus one third). A question in three forms may be assigned to two thirds (one third plus one sixth plus one sixth), or five sixths of the sample (one third plus one third plus one sixth). Footnotes to the tables indicate what proportion of all respondents in each grade completed the question, if that proportion is other than the entire sample. All of the samples, whether based on one or more forms, are random samples.

[4]A book reporting results from analyses of these younger panels was published in 2008. See Bachman, J. G., O'Malley, P. M., Schulenberg, J. E., Johnston, L. D., Freedman-Doan, P., & Messersmith, E. E. (2008). *The education–drug use connection: How successes and failures in school relate to adolescent smoking, drinking, drug use, and delinquency*. New York: Lawrence Erlbaum Associates/Taylor & Francis.

[5]We have examined in detail the effects of administration mode using multivariable controls to assess the effects of the change on 8th-grade self-report data. Our findings generally show even less effect than is to be found without such controls. See O'Malley, P. M., Johnston, L. D., Bachman, J. G., & Schulenberg, J. E. (2000). A comparison of confidential versus anonymous survey procedures: Effects on reporting of drug use and related attitudes and beliefs in a national study of students. *Journal of Drug Issues, 30,* 35–54. doi: 10.1177/002204260003000103

RESEARCH DESIGN AND PROCEDURES FOR THE TWELFTH-GRADE FOLLOW UP SURVEYS

Beginning with the graduating class of 1976, some members of each 12th-grade class have been selected to be surveyed by mail after high school. From the 13,000–19,000 twelfth graders originally surveyed in a given senior class, a representative sample of 2,450 is randomly chosen for follow-up. In order to ensure that drug-using populations are adequately represented in the follow-up surveys, 12th graders reporting 20 or more occasions of marijuana use in the previous 30 days (i.e., daily users), or *any* use of the other illicit drugs in the previous 30 days are selected with higher probability (by a factor of 3.0) than the remaining 12th graders. Differential weighting is then used in all follow-up analyses to compensate for these differential sampling probabilities. Because those in the drug-using stratum receive a weight of only 0.33 in the calculation of all statistics to correct for their overrepresentation at the selection stage, there are actually more follow-up respondents than are reported in the weighted numbers given in the tables; and in recent years actual numbers average about 22% higher than the weighted numbers. The 2,450 participants selected from each 12th-grade class are randomly split into two groups of 1,225 each—one group to be surveyed on even-numbered calendar years in a series of biannual follow-up surveys, and the other group to be surveyed on odd-numbered years also in a series of biannual follow-up surveys. This two-year cycle is intended to reduce respondent burden, thus yielding better retention rates. By alternating the two half-samples, MTF collects data from every graduating class each year (through age 30), even though any given respondent participates only every other year.

Until 2002, each respondent was surveyed biennially up to seven times; at the seventh follow-up, which would occur either 13 or 14 years after graduation, the respondents had reached modal age 31 or 32. In 2002, as a cost-saving measure, the seventh biennial follow-up was discontinued, and since then each respondent is surveyed every other year until modal age 29 or 30. Additional follow-ups then occur at modal ages 35, 40, 45, 50, and beginning in 2013, age 55. Data like these, gathered on representative national samples over such a large portion of the life span, are extremely rare and can provide needed insight into the etiology and life-course history of substance use and relevant behaviors, including those related to HIV transmission.

Follow-Up Procedures

Using information provided by 12th-grade respondents on a tear-off card (requesting the respondent's name, address, phone numbers, and more recently, email address), mail contact is maintained with the subset of people selected for inclusion in the follow up panels. Newsletters are sent to them each year, providing a short summary of results on a variety of survey topics. Name and address corrections are requested from both the U.S. Postal Service and the individual. Questionnaires are sent in the spring to each individual biennially through age 30, then at 5-year intervals. A check, made payable to the respondent, is attached to the front of each questionnaire.[6] Reminder letters and postcards are sent at fixed intervals thereafter; telephone callers attempt to gather up-to-date location information for those respondents with whom we are trying to make contact; and, finally, those whom we can contact but who have not responded receive a prompting phone call from the Survey Research Center's phone interviewing facility in Ann Arbor, Michigan.

[6]Until 1991, the follow-up checks were for $5. After an experiment indicated that an increase was warranted, the check amount was raised to $10 beginning with the class of 1992. The check amount was raised to $20 in 2006, and to $25 beginning in 2008.

If requested, a second copy of the questionnaire is sent. No questionnaire content is administered by phone. If a respondent asks not to be contacted further, that wish is honored.

Follow-Up Questionnaire Format

The questionnaires used in the follow-up surveys of 19- to 30-year-olds parallel those used in 12th grade. Many of the questions are the same, including the core section dealing with drug use. Respondents are consistently mailed the same form of the questionnaire that they first received in 12th grade so that *changes over time* in their behaviors, attitudes, experiences, and so forth can be measured. Questions specific to high school status and experiences are dropped in the follow-ups, and questions relevant to post–high school status and experiences are added (mostly in the core section). The post-high school questions deal with issues such as college attendance, military service, civilian employment, marriage, and parenthood. In the study's early follow-ups (1975-1988), the sample size for a question appearing on a single form was one fifth of the total sample. A sixth form was introduced in 12th grade beginning with the class of 1989 and extended a year later to the follow-up surveys. Therefore, since 1990, a question appearing on a single form has been administered to one sixth of the total sample in the 19-30 age band. Single-form data from a single cohort are typically too small to make reliable estimates; therefore, in most cases where they are reported, single-form data from several adjacent cohorts are combined.

For the five-year interval surveys beginning at age 35, both half-samples from a class cohort are surveyed simultaneously and only one questionnaire form is used. Much of the questionnaire content is maintained but streamlined with a focus on the major family and work issues relevant to respondents ages 35 to 55; we have also added measures of substance use disorders and health outcomes.

REPRESENTATIVENESS AND SAMPLE ACCURACY

School Participation

Schools are invited to participate in the MTF study for a two-year period. For each school that declines to participate, a similar school (in terms of size, geographic area, urbanicity, etc.) is recruited as a replacement. In 2015, either an original school or a replacement school was obtained in 93% of the sample units. With very few exceptions, each school participating in the first year has agreed to participate in the second year as well. Figure 3-2 provides the year-specific school participation rates and the percentage of units filled since 1977. As shown in the figure, replacements for schools that decline participation are obtained in the vast majority of cases.

Two questions are sometimes raised with respect to school participation rates: (a) Are participation rates sufficient to ensure the representativeness of the sample? (b) Does variation in participation rates over time contribute to changes in estimates of drug use?

With respect to participation rates ensuring that the sample is representative, the selection of a comparable replacement school that is demographically close to the original school occurs in practically all instances in which an original school does not participate. This almost entirely removes problems of bias in region, urbanicity, and the like that might result from certain schools declining to participate.

Among participating schools, there is very little difference in substance use levels between the sample of participating schools that were original selections, taken as a set, and the schools that were replacements. Averaged over the years 2003 through 2015 for grades 8, 10, and 12 combined, the difference between original schools and replacement schools averaged 0.26 percentage points in the observed prevalence averaged across a number of drug use measures: two indexes of annual illicit drug use, the annual prevalence of each of the major illicit drug classes, and several measures of alcohol and cigarette use. For half of the measures prevalence was higher in the replacement selections and in the other half it was higher in the original selections; specifically, out of 39 comparisons (13 drugs and drug indexes for each grade), prevalence was higher in 20 of the original selections and in 19 of the replacement selections.

Potential biases at work could be subtle, however. If, for example, it turned out that most schools with "drug problems" refused to participate, the sample would be seriously biased. And if any other single factor were dominant in most refusals, that reason for refusal might also suggest a source of serious bias. However, the reasons schools fail to participate tend to be varied and are often a function of happenstance events specific to that particular year, such as a school shooting or a weather-related event; only very few schools, if any, object specifically to the drug-related survey content.

If it were the case that schools differed substantially in drug use, then which particular schools participated could have a greater effect on estimates of drug use. However, the great majority of variance in drug use lies *within* schools, not between schools.[7] For example, from 2003 to 2015 for schools with 8th, 10th, or 12th grade students, about 2% to 8% of the variance in smoking cigarettes or drinking alcohol in the past 30 days was between schools. Among the illicit drugs, marijuana showed the largest amount of between schools variation, averaging between slightly less than 4% up to 5% for annual use, and 3% to 4% for 30-day use. Annual prevalence of cocaine use averaged between less than 1% and 1.5%, while prevalence of annual heroin use averaged less than 0.5%. Further, some, if not most, of the between-schools variance is due to differences related to factors such as region and urbanicity, which remain well controlled in the present sampling design.

With respect to participation rates and changes in estimates of drug use, it is extremely unlikely that results have been significantly affected by changes in school participation rates. If changes in participation rates seriously affected prevalence estimates, there would be noticeable bumps up or down in concert with the changing rates. But this series of surveys produces results that are very smooth and generally change in an orderly fashion from one year to the next. Moreover, different substances trend in distinctly different ways. We have observed, for example, marijuana use decreasing while cocaine use was stable (in the early 1980s), alcohol use declining while cigarette use held steady (in the mid- to late 1980s), ecstasy use rising sharply while cocaine use showed some decline (late 1990s, early 2000s); and marijuana use continuing to rise while alcohol use hit historic lows (since 2011). Moreover, attitudes and perceptions about drugs have changed variously, but generally in ways quite consistent with the changes in actual use. All of these patterns are explainable in terms of psychological, social, and cultural factors; they cannot be explained by the common factor of changes in school participation rates.

[7] O'Malley, P. M., Johnston, L. D., Bachman, J. G., Schulenberg, J. E., & Kumar, R. (2006). How substance use differs among American secondary schools. *Prevention Science, 7*, 409–420.

Of course, there could be some sort of constant bias across the years, but even in the unlikely event that there is, it seems highly improbable that it would be of much consequence for policy purposes, given that it would not affect trends and likely would have a very modest effect on levels of prevalence. Thus we have a high degree of confidence that school refusal rates have not seriously biased the survey results.

Nevertheless, securing the cooperation of schools has become more difficult in recent years. This is a problem common to the field, not specific to MTF. Therefore, beginning with the 2003 survey, we have provided payment to schools as a means of increasing their incentive to participate. (By that time, several other ongoing school-based survey studies already were using payments to schools.)

At each grade level, half of each year's sample comprises schools that started their participation the previous year, and half comprises schools that began participating in the current year. (Both samples are national replicates, meaning that each is drawn to be nationally representative by itself.) This staggered half sample design is used to check on possible fluctuations in the year to year trend estimates due to school turnover. For example, separate sets of one year trend estimates are computed based on students in the half-sample of schools that participated in *both* 2014 *and* 2015, then based on the students in the half-sample that participated in *both* 2014 *and* 2015, and so on. Thus, each one-year matched half-sample trend estimate derived in this way is based on a constant set of schools (about 65 in 12th grade, for example, over a given one-year interval). When the trend data derived from the *matched half-sample* (examined separately for each class of drugs) are compared with trends based on the total sample of schools, the results are usually highly similar, indicating that the trend estimates are affected little by school turnover or shifting participation rates. As would be expected, levels of *absolute* prevalence for a given year are not as accurately estimated using just the half sample because the sample size is only half as large.

Student Participation

In 2015, completed questionnaires were obtained from 89% of all sampled students in 8th grade, 87% in 10th grade, and 83% in 12th grade (see Table 3-1 for response rates in all years). In the large majority of cases, student non-response is due to absence from school and/or class at the time of data collection; for reasons of cost efficiency, we typically do not schedule special follow up data collections for absent students. Because students with fairly high rates of absenteeism also report above-average rates of drug use, some degree of bias is introduced into the prevalence estimates by missing the absentees. Much of that bias could be corrected through the use of special weighting based on the reported absentee rates provided by the students who *did* respond; however, we decided not to use such a weighting procedure because the bias in overall drug use estimates was determined to be quite small *and* the necessary weighting procedures would have introduced greater sampling variance in the estimates. Appendix A in this report illustrates the changes in trend and prevalence estimates that would result if corrections for absentees had been included. Of course, some students simply refuse, when asked, to complete a questionnaire. However, the proportion of explicit refusals amounts to less than 1.7% of the target sample for each grade.

Sampling Accuracy of the Estimates

Confidence intervals (95%) are provided in Tables 4-1a through 4-1d for lifetime, annual, 30-day, and daily prevalence of use for 8th-, 10th-, and 12th-grade students. As can be seen in Table 4-1a, confidence intervals for lifetime prevalence for 12th graders average less than ±1.4% across a variety of drug classes. That is, if we took a large number of samples of this size from the universe of all schools containing 12th graders in the coterminous United States, 95 times out of 100 the sample would yield a result that would be less than 1.4 percentage points divergent from the result we would get from a comparable massive survey of *all* 12th graders in *all* schools. This is a high level of sampling accuracy, permitting detection of fairly small changes from one year to the next. Confidence intervals for the other prevalence periods (last 12 months, last 30 days, and current daily use) are generally smaller than those for lifetime use. In general, confidence intervals for 8th and 10th graders are very similar to those observed for 12th graders. Some drugs (smokeless tobacco, PCP, and others, as indicated in the footnotes for Tables 2-1 to 2-4) are measured on only one or two questionnaire forms; these drugs will have somewhat larger confidence intervals because they are based on smaller sample sizes. Appendix C has been included in this series of volumes to provide readers information on how to calculate confidence intervals around other point estimates, as well as information needed to compare trends across time or to test the significance of differences between subgroups in any given year.

PANEL SURVEYS

Results reported in this volume are based on the yearly data from 8th-, 10th-, and 12th-grade respondents. Results from the panel studies that follow respondents in each graduating class of 12th graders are reported in *Volume II*[8] of this series, which also provides detailed information on the panel research design and retention rates in Chapter 3—"Study Design and Procedures."

VALIDITY OF MEASURES OF SELF-REPORTED DRUG USE

Are sensitive behaviors such as drug use honestly reported? Like most studies dealing with sensitive behaviors, we have no direct, totally objective validation of the present measures; however, the considerable amount of existing inferential evidence strongly suggests that the MTF self-report questions produce largely valid data. Here we briefly summarize this evidence.[9]

First, using a three-wave panel design, we established that the various measures of self-reported drug use have a high degree of reliability—a necessary condition for validity.[10] In essence, respondents were highly consistent in their self-reported behaviors over a three- to four-year time interval. Second, we found a high degree of consistency among logically related measures of use within the same questionnaire administration. Third, the proportion of 12th graders reporting some

[8]Johnston, L. D., O'Malley, P. M., Bachman, J. G., Schulenberg, J. E., & Miech, R. A. (2015). *Monitoring the Future national survey results on drug use, 1975-2014: Volume II, college students and adults ages 19-55*. Ann Arbor: Institute for Social Research, The University of Michigan, 416 pp.

[9]A more complete discussion may be found in: Johnston, L. D., & O'Malley, P. M. (1985). Issues of validity and population coverage in student surveys of drug use. In B. A. Rouse, N. J. Kozel, & L. G. Richards (Eds.), *Self-report methods of estimating drug use: Meeting current challenges to validity* (NIDA Research Monograph No. 57 (ADM) 85 1402). Washington, DC: U.S. Government Printing Office; Johnston, L. D., O'Malley, P. M., & Bachman, J. G. (1984). *Drugs and American high school students: 1975–1983* (DHHS (ADM) 85 1374). Washington, DC: U.S. Government Printing Office; Wallace, J. M., Jr., & Bachman, J. G. (1993). Validity of self-reports in student-based studies on minority populations: Issues and concerns. In M. de LaRosa (Ed.), *Drug abuse among minority youth: Advances in research and methodology* (NIDA Research Monograph No. 130). Rockville, MD: National Institute on Drug Abuse.

[10]O'Malley, P. M., Bachman, J. G., & Johnston, L. D. (1983). Reliability and consistency in self-reports of drug use. *International Journal of the Addictions, 18,* 805–824.

illicit drug use has reached two thirds of all respondents in peak years and over 80% in some follow up years, constituting *prima facie* evidence that the degree of underreporting must be very limited. Fourth, 12th graders' reports of use by their unnamed friends—about whom they would presumably have considerably less reason to conceal information about use—have been highly consistent with self-reported use in the aggregate, in terms of both prevalence *and* trends in prevalence, as discussed in chapter 9. Fifth, we have found self-reported drug use to relate in consistent and expected ways based on theory to a number of other attitudes, behaviors, beliefs, and social situations—strong evidence of "construct validity". Sixth, the missing data levels for the self-reported use questions are only very slightly higher than for the preceding nonsensitive questions, in spite of explicit instructions to respondents immediately preceding the drug section to leave blank those questions they feel they cannot answer honestly. Seventh, an examination of consistency in reporting of lifetime use conducted on the long-term panels of graduating seniors found quite low levels of recanting of earlier reported use of the illegal drugs.[11] There was a higher level of recanting for the psychotherapeutic drugs, suggesting that adolescents may actually overestimate their use of some drugs because of misinformation about definitions, and this misinformation is corrected as they get older. Finally, the great majority of respondents, when asked, say they *would* answer such questions honestly if they were users.[12]

As an additional step to assure the validity of the data, we check for logical inconsistencies in the answers to the triplet of questions about use of each drug (i.e., lifetime, annual, and 30-day use), and if a respondent exceeds a maximum number of inconsistencies across the set of drug use questions, his or her record is deleted from the data set. Similarly, we check for improbably high rates of use of multiple drugs and delete such cases, assuming that the respondents are not taking the task seriously. Fortunately, very few cases have to be eliminated for these reasons.

This is not to argue that self-reported measures of drug use are necessarily valid in all studies. In MTF we have gone to great lengths to create a situation and set of procedures in which respondents recognize that their confidentiality will be protected. We have also tried to present a convincing case as to why such research is needed. The evidence suggests that a high level of validity has been obtained. Nevertheless, insofar as any remaining reporting bias exists, we believe it to be in the direction of underreporting. Thus, with the possible exception of the psychotherapeutic drugs, we believe our estimates to be lower than their true values, even for the obtained samples, but not substantially so.

Consistency and Measurement of Trends

MTF is designed to be sensitive to changes from one time period to another. A great strength of this study is that the measures and procedures have been standardized and applied consistently across many years. To the extent that any biases remain because of limits in school and/or student participation, and to the extent that there are distortions (lack of validity) in the responses of some students, it seems very likely that such problems will exist in much the same proportions from one year to the next. In other words, biases in the survey estimates will tend to be consistent from one

[11]Johnston, L. D., & O'Malley, P. M. (1997). The recanting of earlier reported drug use by young adults. In L. Harrison (Ed.), *The validity of self-reported drug use: Improving the accuracy of survey estimates* (NIDA Research Monograph No. 167, pp. 59–80). Rockville, MD: National Institute on Drug Abuse.

[12]For a discussion of reliability and validity of student self-report measures of drug use like those used in MTF across varied cultural settings, see Johnston, L. D., Driessen, F. M. H. M., & Kokkevi, A. (1994). Surveying student drug misuse: A six-country pilot study. Strasbourg, France: Council of Europe.

year to another, meaning that our measurement of *trends* should be affected very little. The smooth and consistent nature of most trend curves reported for the various drugs provides rather compelling empirical support for this assertion.

TABLE 3-1
Sample Sizes and Response Rates

	Number of Public Schools			Number of Private Schools			Total Number of Schools				Total Number of Students				Student Response Rate (%)		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	Total	8th	10th	12th	Total	*8th*	*10th*	*12th*
1975	—	—	111	—	—	14	—	—	125	—	—	—	15,791	—	—	—	*78*
1976	—	—	108	—	—	15	—	—	123	—	—	—	16,678	—	—	—	*77*
1977	—	—	108	—	—	16	—	—	124	—	—	—	18,436	—	—	—	*79*
1978	—	—	111	—	—	20	—	—	131	—	—	—	18,924	—	—	—	*83*
1979	—	—	111	—	—	20	—	—	131	—	—	—	16,662	—	—	—	*82*
1980	—	—	107	—	—	20	—	—	127	—	—	—	16,524	—	—	—	*82*
1981	—	—	109	—	—	19	—	—	128	—	—	—	18,267	—	—	—	*81*
1982	—	—	116	—	—	21	—	—	137	—	—	—	18,348	—	—	—	*83*
1983	—	—	112	—	—	22	—	—	134	—	—	—	16,947	—	—	—	*84*
1984	—	—	117	—	—	17	—	—	134	—	—	—	16,499	—	—	—	*83*
1985	—	—	115	—	—	17	—	—	132	—	—	—	16,502	—	—	—	*84*
1986	—	—	113	—	—	16	—	—	129	—	—	—	15,713	—	—	—	*83*
1987	—	—	117	—	—	18	—	—	135	—	—	—	16,843	—	—	—	*84*
1988	—	—	113	—	—	19	—	—	132	—	—	—	16,795	—	—	—	*83*
1989	—	—	111	—	—	22	—	—	133	—	—	—	17,142	—	—	—	*86*
1990	—	—	114	—	—	23	—	—	137	—	—	—	15,676	—	—	—	*86*
1991	131	107	117	31	14	19	162	121	136	419	17,844	14,996	15,483	48,323	*90*	*87*	*83*
1992	133	106	120	26	19	18	159	125	138	422	19,015	14,997	16,251	50,263	*90*	*88*	*84*
1993	126	111	121	30	17	18	156	128	139	423	18,820	15,516	16,763	51,099	*90*	*86*	*84*
1994	116	116	119	34	14	20	150	130	139	419	17,708	16,080	15,929	49,717	*89*	*88*	*84*
1995	118	117	120	34	22	24	152	139	144	435	17,929	17,285	15,876	51,090	*89*	*87*	*84*
1996	122	113	118	30	20	21	152	133	139	424	18,368	15,873	14,824	49,065	*91*	*87*	*83*
1997	125	113	125	27	18	21	152	131	146	429	19,066	15,778	15,963	50,807	*89*	*86*	*83*
1998	122	110	124	27	19	20	149	129	144	422	18,667	15,419	15,780	49,866	*88*	*87*	*82*
1999	120	117	124	30	23	19	150	140	143	433	17,287	13,885	14,056	45,228	*87*	*85*	*83*
2000	125	121	116	31	24	18	156	145	134	435	17,311	14,576	13,286	45,173	*89*	*86*	*83*
2001	125	117	117	28	20	17	153	137	134	424	16,756	14,286	13,304	44,346	*90*	*88*	*82*
2002	115	113	102	26	20	18	141	133	120	394	15,489	14,683	13,544	43,716	*91*	*85*	*83*
2003	117	109	103	24	20	19	141	129	122	392	17,023	16,244	15,200	48,467	*89*	*88*	*83*
2004	120	111	109	27	20	19	147	131	128	406	17,413	16,839	15,222	49,474	*89*	*88*	*82*
2005	119	107	108	27	20	21	146	127	129	402	17,258	16,711	15,378	49,347	*90*	*88*	*82*
2006	122	105	116	29	18	20	151	123	136	410	17,026	16,620	14,814	48,460	*91*	*88*	*83*
2007	119	103	111	32	17	21	151	120	132	403	16,495	16,398	15,132	48,025	*91*	*88*	*81*
2008	116	103	103	28	19	17	144	122	120	386	16,253	15,518	14,577	46,348	*90*	*88*	*79*
2009	119	102	106	26	17	19	145	119	125	389	15,509	16,320	14,268	46,097	*88*	*89*	*82*
2010	120	105	104	27	18	22	147	123	126	396	15,769	15,586	15,127	46,482	*88*	*87*	*85*
2011	117	105	110	28	21	19	145	126	129	400	16,496	15,382	14,855	46,733	*91*	*86*	*83*
2012	115	107	107	27	19	20	142	126	127	395	15,678	15,428	14,343	45,449	*91*	*87*	*83*
2013	116	103	106	27	17	20	143	120	126	389	15,233	13,262	13,180	41,675	*90*	*88*	*82*
2014	111	98	105	30	16	17	141	114	122	377	15,195	13,341	13,015	41,551	*90*	*88*	*82*
2015	111	102	101	30	18	20	141	120	121	382	15,015	16,147	13,730	44,892	*89*	*87*	*83*

Source. The Monitoring the Future study, the University of Michigan.

TABLE 3-2
Substance Use Among Ages 19-28, Based on 2013 Data from Monitoring the Future and The National Survey on Drug Use and Health

	NSDUH	MTF (Selection Weight Only)	MTF (Post-Stratification Weight)
Marijuana (use in past month)	17.9	16.9	19.1
Cocaine (use in past year)	4.7	3.5	3.9
Alcohol (use in past month)	65.0	67.7	68.7
Cigarettes (use in past month)	32.1	17.5	20.0

Source. The Monitoring the Future study, the University of Michigan and the National Survey on Drug Use and Health.

FIGURE 3-1
Schools included in 1 Year's Data Collection
8th, 10th, and 12th Grades



Source. The Monitoring the Future study, the University of Michigan.
Note. One dot equals one school.

FIGURE 3-2
School Participation Rates



Percent of slots

filled by...	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15
Original	59	63	62	63	71	71	66	72	67	66	72	71	68	70	59	55	60	53	52	53	51	51	57	62	56	49	53	62	63	59	58	53	54	58	56	53	54	51	44
Replacements	39	36	35	32	25	26	32	26	29	33	26	26	30	29	39	43	39	44	44	43	47	48	42	35	42	48	45	37	34	40	39	43	44	39	40	43	41	41	49
Total	98	99	97	95	96	97	99	98	96	99	99	98	99	99	98	98	99	97	96	96	98	99	99	97	98	97	98	99	97	99	97	96	98	97	96	96	95	92	93

Source: The Monitoring the Future study, the University of Michigan.

Chapter 4

PREVALENCE OF DRUG USE IN EARLY, MIDDLE, AND LATER ADULTHOOD

Longitudinal panel studies that track the same individuals across several years are typically used to examine developmental changes with age, as is evident in many of our publications. At the same time, the multiple cohort feature of the MTF design provides a useful snapshot of each age group in a given year, showing the prevalence of use of various substances for each age group in that year, thus enabling us to compare these prevalence rates with those of the same age in earlier years. This chapter highlights such prevalence data for the adult age groups covered by MTF, starting right after high school and moving through middle and into older adulthood Each age group is defined by the modal age for its graduating high school class cohort.[1] We will see that recent use tends to be higher in the early post-high school age groups, corresponding to the new freedoms associated with leaving high school and often moving away from the parental home.[2,3] But sometimes there are also strong cohort effects that underlie differences among age groups at a given point in time; in this chapter we will see evidence of both age-related differences and cohort effects.

Estimates of drug use in the adult population are most often generated through household survey interviews of cross-sections of the general population. In the present study, our estimates come from self-reported mail questionnaires from respondents in the follow-up surveys. These are representative samples of previous classes of high school students who started their participation in MTF in their senior year. As described in more detail in Chapter 3, MTF has conducted ongoing panel studies on representative samples from each graduating high school senior class beginning with the class of 1976. From each class, two matched nationally representative subpanels of roughly 1,200 students each are randomly selected to comprise the long-term follow-up panels; one of these two subpanels is surveyed every even-numbered year after graduation, and the other is surveyed every odd-numbered year, up through age 29/30. Beginning at modal age 35, data collection occurs at the same time for both subpanels at five-year intervals, beginning at modal age 35. So, while each *cohort* participates every year up through age 30, each *individual respondent* participates only every other year until age 29/30. This alternating panel design was chosen to reduce the repetitiveness (and burden) of participating in the panel study every year while still allowing for full age coverage between 19 and 30. Thus, in a given year, the study includes respondents age 19–30 from one of the two panels from each of the last 12 senior classes previously participating in MTF.[4]

[1]High school seniors have a modal age (the most common age) of 18; therefore, in a follow-up conducted 12 years later they would have a modal age of 30.

[2]Bachman, J. G., Wadsworth, K. N., O'Malley, P. M., Johnston, L. D., & Schulenberg, J. E. (1997). *Smoking, drinking, and drug use in young adulthood: The impacts of new freedoms and new responsibilities.* Mahwah, NJ: Lawrence Erlbaum Associates.

[3]Bachman, J. G., O'Malley, P. M., Schulenberg, J. E., Johnston, L. D., Freedman-Doan, P., & Messersmith, E. E. (2008). *The education–drug use connection: How successes and failures in school relate to adolescent smoking, drug use, and delinquency*. New York: Lawrence Erlbaum Associates/Taylor & Francis.

[4]Through 2001, the follow-ups also included modal ages 31 and 32. This seventh follow-up was dropped in 2002 because we believed that the costs were no longer justified by the marginal benefits of having these follow-up data, given that an age-35 survey was being conducted. Throughout the time between surveys, we send annual newsletters to respondents in order to help maintain contact.

In 2015, representative samples of the classes of 2003 through 2014—modal ages 19 to 30—were surveyed using the same set of standard young adult survey instruments at each age. For brevity, we refer to this 19- through 30-year-old age range as "young adults" in this chapter.

To build on these important national panels of young adults, we extend the surveys into and beyond middle adulthood. The middle adulthood surveys are conducted beginning at modal age 35 (that is, 17 years after high school graduation) and at five-year intervals thereafter. In each of these later follow-ups, the two sub-panels from the relevant graduating class are *both* surveyed, using a single questionnaire form instead of the six forms that were used from age 19 to 30. The content of the questionnaires is revised to some degree across age to be more relevant to the different developmental periods, although key substance use and other measures remain the same. The results of the 2015 follow-up surveys characterize the population of high school graduates of modal ages 19–30, 35, 40, 45, 50, and 55. The high school dropout segment, which represents the 8%–15% missing from the senior year surveys, is missing from all of the follow-up surveys as well. Thus, the results presented here are not necessarily generalizable to the entire population of each age, but are generalizable to the great majority of young and middle-aged adults.

Figures 4-1 through 4-21 contain 2015 *prevalence* data by age, corresponding to respondents ages 19–30, as well as 35-, 40-, 45-, 50-, and 55-year-olds. For comparison purposes, data are also included for the 2015 high school senior class, listed as 18-year-olds. Figures provided in Chapter 5 contain the *trend* data for each of these age groups derived from the repeated cross-sectional surveys, including 12th graders and high school graduates through age 55. In the figures in Chapters 4 and 5, age groups spanning the young adult years have been paired into two-year intervals in order to increase the number of cases, and thus the precision, for each point estimate. The data for ages 35, 40, 45, 50, and 55 are, of necessity, based on a single age in each case. As indicated above, *both* half-samples from a given class cohort are included in each year's samples of 35-, 40-, 45-, 50-, and 55-year-olds. In 2015 the paired half-samples came from the high school graduating classes of 1998, 1993, 1988, 1983, and 1978, respectively. The respective weighted numbers of cases were 740, 792, 870, 817, and 902. (Actual unweighted numbers are somewhat higher, because those from the oversampled drug-using stratum in high school—which was drawn at three times the rate of the others to assure a sufficient sample of drug users—are counted as only one third of a case in the weighted follow-up data.)

REPLICABILITY OF FINDINGS

It is worth noting that any pattern of age-related differences found in one year can be checked in an adjacent year (i.e., the previous or succeeding year's volume) for replicability, because two non-overlapping half-samples of follow-up respondents in the 19-to-30 age band are surveyed on alternating years. In the case of the 35-, 40-, 45-, 50-, and 55-year-olds, two entirely different graduating classes make up the samples for any two adjacent, chronological years of the survey results.

THE IMPORTANCE OF ADJUSTED LIFETIME PREVALENCE ESTIMATES

In Figures 4-1 through 4-21, two different estimates of *lifetime* prevalence are provided. One estimate is based on the respondents' *most recent* (i.e., 2015) statements about ever having used the drug in question (the light gray bar). The other estimate takes into account each respondent's answers regarding lifetime use gathered from *all* of the previous data collections in which he or

she participated (the white bar). *To be categorized as one who has used the drug based on all past answers regarding that drug, a respondent must have reported either lifetime use in the most recent data collection* and/or *reported some use in his or her lifetime on* at least two *earlier data collections.* (Because respondents of ages 18 through 20 cannot have their responses adjusted on the basis of two earlier data collections, adjusted prevalence rates are reported only for ages 21 and up.) Most other epidemiological studies can present only an unadjusted estimate because they have data from a single cross-sectional survey. An adjusted estimate of the type used here is possible only when panel data have been gathered so that a respondent can be classified as having used a drug at some time in his or her life, based on earlier answers, even though he or she no longer indicates lifetime use in the most recent survey.

The divergence of these two estimates as a function of age shows that inconsistency increases as time passes. Obviously, there is more opportunity for inconsistency as the number of data collections increases. Our judgment is that the truth lies somewhere between the two estimates: the lower estimate may be depressed by tendencies to forget, forgive, or conceal earlier use, whereas the upper estimate may include earlier response errors or incorrect definitions of drugs that respondents appropriately corrected in later surveys as they became more knowledgeable. It should be noted that a fair proportion of those giving inconsistent answers across time had earlier reported having used the given drug only once or twice in their lifetime.

As we have reported in depth elsewhere, the cross-time stability of self-reported usage measures, taking into account both prevalence and frequency of self-reported use, is still very high.[5] Note that the divergence between the two lifetime prevalence estimates is greatest for the psychotherapeutic drugs and for the derivative index of ***use of an illicit drug other than marijuana***, which is heavily affected by the estimates of psychotherapeutic drug use. We believe this is due to respondents having greater difficulty accurately categorizing psychotherapeutic drugs (usually taken in pill form) with a high degree of certainty—especially if such a drug was used only once or twice. We expect higher inconsistency across time when the event—and in many of these cases, a single event—is reported with a relatively low degree of certainty at quite different points in time. Those who have gone beyond simple experimentation with one of these drugs would undoubtedly be able to categorize them with a higher degree of certainty. Also, those who have experimented more recently (i.e., in the past month or year) should have a higher probability of recall as well as fresher information for accurately categorizing the drug.

We provide both estimates to make clear that a full use of respondent information provides a possible range for lifetime prevalence estimates, not a single point. However, by far the most important use of the prevalence data is to track *trends* in *current* (as opposed to lifetime) use. Thus, we are much less concerned about the nature of the variability in the lifetime estimates than we might otherwise be. The lifetime prevalence estimates are of importance primarily in showing the degree to which a drug class has penetrated the general population overall as well as particular cohorts; we believe that the evidence from the lifetime estimates suggests that cross-sectional surveys of adults are subject to underreporting and that to some degree such

[5]O'Malley, P. M., Bachman, J. G., & Johnston, L. D. (1983). Reliability and consistency in self-reports of drug use. *International Journal of the Addictions, 18*, 805–824.

underreporting increases with age, because adolescence and early adulthood are the periods in the life course during which most drug use occurs.[6]

The reweighting procedures used to adjust the panel data for the effects of panel attrition are described in Chapter 3.

PREVALENCE OF DRUG USE ACROSS AGE GROUPS[7]

Figures 4-1 through 4-21 provide 2015 prevalence rates for each class of drugs, covering respondents ages 18 to 55. For virtually all drugs, available age comparisons show much higher *lifetime* prevalence for the older age groups, as would be expected. In fact, the figures reach surprisingly high levels among adults in their early 30s through their 50s.

- The *adjusted lifetime prevalence* figures are most striking for today's 55-year-olds (the high school class of 1978), who were passing through adolescence near the peak of the drug epidemic. Some 90% reported trying ***an illicit drug*** (lifetime prevalence, adjusted), leaving only 10% who reported never having done so (Figure 4-1). Four out of five 55-year-olds (81%) said they had tried ***marijuana***, and about three quarters (77%) said they had tried some ***other illicit drug***, including 46% who had tried ***cocaine*** specifically. It is clear from Figure 4-1 that the parents of today's teenagers and young adults are a very drug-experienced generation; this, among other things, may help to explain the acceptance of medical marijuana in a large number of states and legalization of recreational marijuana use for adults in a growing number of states.

- In 2015, the adjusted lifetime prevalence figures among 29- to 30-year-olds reached 78% for ***any illicit drug***, 70% for ***marijuana***, 54% for ***any illicit drug other than marijuana***, and 21% for ***cocaine***. Put another way, even among young Americans who graduated from high school in 2003 and 2004—after the peak of the longer-term drug epidemic, but near the peak of the relapse phase in the epidemic—only about one fifth (22%) report *never* having tried an illegal drug.

 The 2015 survey responses, when *unadjusted* for previous answers, showed only modestly lower lifetime prevalence for 29- to 30-year-olds: 73% for any illicit drug, 67% for marijuana, 46% for any illicit drug other than marijuana, and 18% for cocaine.

- Despite the higher lifetime prevalence rates among older age groups, these groups generally showed *annual* or *30-day* prevalence rates that are considerably lower than those

[6]For a more detailed analysis and discussion, see Johnston, L. D., & O'Malley, P. M. (1997). The recanting of earlier-reported drug use by young adults. In L. Harrison & A. Hughes (Eds.), *The validity of self-reported drug use: Improving the accuracy of survey estimates* (NIDA Research Monograph No. 97-4147). Washington, DC: National Institute on Drug Abuse. Available at http://archives.drugabuse.gov/pdf/monographs/monograph167/059-080_Johnston.pdf

[7]This section discusses differences in the current year as a function of age, but it should be noted that these age differences are confounded with cohort differences. Thus, although the discussion is accurate with respect to age differences, it is not necessarily the case that the age differences would be similar in other time periods. In fact, our recent evidence, including many findings provided in Chapter 5, suggests both similarities and differences by age across cohorts. See also Jager, J., Schulenberg, J. E., O'Malley, P. M., & Bachman, J. G. (2013). Historical variation in drug use trajectories across the transition to adulthood: The trend toward lower intercepts and steeper, ascending slopes. *Development and Psychopathology*, *25*(2), 527-543. doi:10.1017/S0954579412001228.

of today's 12th graders or young adults, suggesting that the incidence of quitting more than offsets the incidence of initiating use of these drugs during the years after high school.

In analyses published elsewhere, we looked closely at patterns of change in drug use with age and identified post-high school experiences that contribute to declining levels of annual or current use of drugs as respondents grow older. For example, the likelihood of marriage increases with age, and we have found that marriage is consistently associated with declines in ***alcohol*** use, ***heavy drinking***, ***marijuana*** use, and ***cocaine*** use, and most likely just about all of the other illicit drugs as well.[8]

- For use of ***any illicit drug*** (Figure 4-1), 2015 *lifetime* prevalence (unadjusted) was about 65% to 73% among 25- to 40-year-olds versus 49% among 12th graders. *Annual* prevalence was highest among 21- to 22-year-olds in 2015 (42%) and lowest among the older age groups, reaching 28% among 29- to 30-year-olds and 18% among 55-year-olds. Current (30-day) prevalence shows the rate generally declining with each age band, from 24% among 12th graders to 15% among 29- to 30-year-olds, to 10% to 12% among the 40- to 55-year-olds.

- *Lifetime* prevalence rates for ***marijuana*** are higher with each increase in age level generally, except for a dip among 40-year-olds from the class of 1993, who graduated from high school at a relatively low point in the recent history of teenage marijuana use. (This pattern is true for several other illicit drugs.) However, *annual* and *30-day* prevalence rates for marijuana generally decline from ages 22 to 45, and then remain fairly level through age 55. Thus, it is clear that greater proportions of the older cohorts have discontinued use (Figures 4-1, 4-2, and 4-3). The annual and 30-day prevalence rates were fairly equivalent for 18-, 19- to 20-, and 21- to 22-year-olds in 2015.

- Current ***daily marijuana*** use shows considerable variation across age (as shown in Figure 4-3 in this chapter as well as in Figure 5-3c in Chapter 5). In 2015 prevalence ranged from 6–8% for those respondents 18 to 26 years old to about 2–3% for the age groups from 40 to 55 years old. (Clearly, most respondents who were daily users at some point in their teenage years are no longer daily users.)

- ***Synthetic marijuana*** refers to a set of substances that contain synthetic cannabinoids that are meant to mimic the effects of cannabinoids found in natural marijuana; synthetic cannabinoids are created artificially and typically sprayed on herbal and plant material, which is then smoked. These substances have been sold over-the counter in head shops, gas stations, on the Internet, and in other venues under various brand names like "spice"

[8]Bachman, J. G., Wadsworth, K. N., O'Malley, P. M., Johnston, L. D., & Schulenberg, J. E. (1997). *Smoking, drinking, and drug use in young adulthood: The impacts of new freedoms and new responsibilities.* Mahwah, NJ: Lawrence Erlbaum Associates; and Bachman, J. G., O'Malley, P. M., Schulenberg, J. E., Johnston, L. D., Bryant, A. L., & Merline, A. C. (2002). *The decline of substance use in young adulthood: Changes in social activities, roles, and beliefs*. Mahwah, NJ: Lawrence Erlbaum Associates. See also Schulenberg, J. E., O'Malley, P. M., Bachman, J. G., & Johnston, L. D. (2000). "Spread your wings and fly": The course of well-being and substance use during the transition to young adulthood. In L. J. Crockett & R. K. Silbereisen (Eds.), *Negotiating adolescence in times of social change* (pp. 224–255). New York: Cambridge University Press. And see O'Malley, P. M., Bachman, J. G., Johnston, L. D., & Schulenberg, J. E. (2004). Studying the transition from youth to adulthood: Impacts on substance use and abuse. In J. S. House, F. T. Juster, R. L. Kahn, H. Schuman, & E. Singer (Eds.), *A telescope on society: Survey research and social science at the University of Michigan and beyond* (pp. 305–329). Ann Arbor, MI: The University of Michigan Press.

and "K-2." In 2011 the Drug Enforcement Administration scheduled five of the chemicals most commonly used, but often chemists are able to adjust the chemical composition just enough to evade the prohibitions. The American Association of Poison Control Centers has reported a substantial increase since 2010 in calls about adverse reactions to synthetic marijuana.[9] A question about the use of these products was added to both the MTF in-school and follow-up surveys in 2011. Some 5.2% of the 2015 seniors reported using synthetic marijuana in the prior 12 months (down considerably from 2012), while among all young adults ages 19 to 30 years, the annual prevalence in 2015 was 1.3%; however, the two most recent graduating classes (ages 19–20) had the highest rates of use (3.3%) in this age band, no doubt reflecting a continuation of their higher rates of use in high school (Table 4-3).

- Another important class of synthetic drugs called ***bath salts*** was added to the MTF questionnaires in 2012. Fortunately, the rates of use of these dangerous over-the-counter stimulants, which are intended to mimic the effects of amphetamines, are quite low at this point. In 2015, the high school seniors had an annual prevalence rate of 1.0%, and all of the other age groups had rates of 0.4% or less with the single exception of 19- to 20-year-olds (0.8%). Data from the National Poison Control Centers suggest that use of these drugs peaked prior to 2012; the decline thereafter was quite possibly the result of heavy media coverage of their adverse effects.

- Adjusted rates for *lifetime* use of ***any illicit drug other than marijuana*** (Figure 4-2) showed an appreciable rise with age, reaching 54% for the 29- to 30-year-old age group and 77% among 55-year-olds. *In other words, about three quarters of all 55-year-olds have tried some illicit drug other than marijuana, and more than half of today's 30-year-olds have done so. Current (past 30-day)* use shows a slight rise and then a decline across age bands; rates range from 8% among 12th graders to a high of 12% among 21- to 22-year-olds, and then down to 4–6% for the age groups above 35. After ages 23–24, *annual* use is generally lower with increased age of the respondent. A number of the individual drugs that comprise this general category show lower rates of use at higher ages for annual prevalence, usually with the highest rate observed at ages 18–22. This is particularly true for ***amphetamines***, ***hallucinogens***, ***LSD*** specifically, ***hallucinogens other than LSD***, and ***inhalants***. The falloff with age is not as great nor as consistent for ***cocaine***, ***crack***, ***other cocaine***, ***crystal methamphetamine*** (***ice***), ***heroin***, ***narcotics other than heroin***, ***sedatives*** (***barbiturates***), and ***tranquilizers***, though in general, usage rates are somewhat lower among those in their 30s than among those in their early 20s. Several of these classes of drugs are discussed individually next.

- ***Hallucinogens*** (Figure 4-10) have been used by a fair proportion of adults. Adjusted lifetime rates were between 26% and 30% for those ages 35, 40, 45, and 50. (Hallucinogens are not included in the age 55 survey.) Lifetime prevalence was lower at younger ages, and was at 12%, adjusted, at ages 21 to 22. However, annual prevalence declines with age: 6% at age 21-22, 3% at age 29-30, and 1% or less at the older ages.

[9]American Association of Poison Control Centers, Synthetic marijuana data updated April 16, 2012. http://www.aapcc.org/alerts/synthetic-marijuana/.

- ***LSD*** (Figure 4-11) had been the most prevalent hallucinogen for some time. It had a fairly limited lifetime prevalence among young adults in 2015, reaching a high of 10% adjusted by ages 29 to 30. Annual prevalence was highest among 21 to 22-year-olds at 4%, falling thereafter to only 1% by ages 27 to 28 and above. LSD use was not asked of those over age 30.

- ***Hallucinogens other than LSD*** (Figure 4-12), which means psilocybin for the most part ("magic mushrooms"), had a higher lifetime prevalence among young adults in 2015 than LSD, reaching 21% by ages 29 to 30. Annual prevalence was also generally slightly higher for hallucinogens other than LSD than for LSD, 2.9% vs 2.4% for age 19–30. Use is not asked of those over age 30.

- ***Inhalants*** showed some very interesting differences across age strata (Figure 4-13). There was a modest difference across age in contemporaneously reported lifetime prevalence, but a considerable difference in the lifetime prevalence figure *adjusted* for previous reporting of use. The adjusted pattern—an increase with age—is almost certainly the more accurate one. Annual prevalence declined with age, while 30-day rates were already quite low by 12th grade and do not have much more room to decline. Clearly, current use of inhalants is almost absent beyond about age 18, and we know from data presented in *Volume I* that much of the decline in use with age has already occurred by 10th grade. Use is not asked of those over age 30.

- For ***amphetamines*** used without a doctor's orders, lifetime prevalence was much higher among the older age groups, reflecting in part the addition of new users who initiate use in their 20s, but also reflecting some cohort differences carried over from high school (Figure 4-4). As is true for most psychotherapeutic drugs, corrected lifetime prevalence and contemporaneously reported lifetime prevalence diverge considerably. However, more recent use, as reflected in the annual prevalence figure, was considerably lower among the older age groups. This has not always been true; the present pattern reflects a sharper historic decline in use among older respondents than has occurred among 12th graders, as well as cohort differences in having ever used these drugs. These trends are discussed in the next chapter.

- ***Ritalin***, an amphetamine widely prescribed for the treatment of attention deficit hyperactivity disorder or ADHD, shows a relatively low annual prevalence of non-medical use (between 0.4% and 2.6% between ages 19 and 30, with the lowest use at the older ages; Table 4-3).

- ***Adderall***, a similar and newer drug, showed a substantially higher annual prevalence of non-medical use in 2015, compared to Ritalin, and it also dropped off in use with age, from 8–11% among 19- to 22-year-olds to 3.0% among 29- to 30-year-olds. The higher rates of use among those in their early 20s are consistent with the interpretation that initially Ritalin and perhaps now Adderall are sometimes used by college students to enhance their academic performance (Table 4-3). Respondents over age 30 are not asked about Ritalin or Adderall use.

- Questions on the use of ***methamphetamine*** are contained in only two of the six questionnaire forms for young adults, so estimates are less reliable than those based on all six forms. In 2015 unadjusted lifetime use increased with age, from 0.9% for 19- to 20-year-olds to 5.8% for 29- to 30-year-olds, and adjusted figures are only slightly higher. This suggests that much initiation of methamphetamine use occurs after high school, though more recent cohorts of high school graduates have been reporting considerably lower levels of use post high school. *Annual* prevalence did not vary with age, however, remaining at 0–1% for ages 18–30 in this population of high school graduates (Table 4-3 and Figure 4-5.) Respondents over age 30 are not asked about methamphetamine use.

- ***Crystal methamphetamine*** (***ice***) is also included on only two questionnaire forms through age 30 and is not asked of older respondents. Among the 19- to 30-year-old respondents *combined*, only 0.2% now reported any use in the prior year—slightly lower than the 0.5% reported by 12th graders (Table 4-3 and Figure 4-6).

- ***Sedatives*** (***barbiturates***) showed lifetime prevalence rates for non-medically prescribed use that rose from ages 19 through 35; rates were lower at ages 40 and 45, and then were higher in subsequent age bands that passed through adolescence closer to the peak years of the epidemic (Figure 4-14). This was also consistent with the sharp falloff in sedative use among 12th graders in subsequent years of the study, giving rise to a cohort effect. *Annual* use was more similar across ages 19 to 55 at about 2–4%. Past 30-day usage was quite low at all ages, ranging from 0.3 to 1.5%. Because of the substantial long-term decline in sedative (barbiturate) use over the life of MTF, the 55-year-olds had, by far, the highest adjusted lifetime prevalence rate (32%); but they were not any more likely to be currently using than the younger age groups.[10]

- Non-medically prescribed use of ***tranquilizers*** (Figure 4-16) shows a similar picture to that for sedatives, with a general increase across age-bands in lifetime prevalence through age 35, with a dip among those age 40, again reflecting a likely cohort effect in terms of the increased use among adolescents in the 1990s. The several age bands above age 40 again showed higher, indeed the highest, levels of lifetime prevalence. Annual prevalence of tranquilizer use differed little between ages 18 and 35—all at 5–6%, whereas the older age bands through age 55 showed slightly lower prevalence rates—all at 3-4%. Thirty-day prevalence was 1–3% across all age groups.

- *Lifetime* prevalence of non-medically prescribed use of ***narcotics other than heroin*** adjusted (Figure 4-15) rose sharply across the young adult years; it was highest at 31% at ages 29 to 30 in 2015, and then fell off to 27% among those age 40. After age 40 the lifetime rates were higher again with each age band, reaching 38% adjusted by age 55. *Annual* prevalence hovered between 4% and 6% up through age 35, but fell to 3-5% from age 40 to 55. *Thirty-day* prevalence showed little difference across the age bands, with rates at 1–2% up through age 55. Figure 4-15 shows the cohort effects of the upturn in the use of

[10]Barbiturates were the dominant form of sedatives in use when these questions were first introduced. In the intervening years, a number of non-barbiturate sedatives have entered the market and largely displaced barbiturates. We believe that a number of users of non-barbiturate sedatives are reporting them in answer to this question, which also defines them in terms of the conditions for which they are prescribed. In recognition of this fact, we now label them as "sedatives (barbiturates)." The rewording of the question was made in half of the questionnaire forms in 2004 and in the other half in 2005.

narcotic drugs in recent years, with those ages 29–30 and 35 having higher lifetime prevalence rates than 40- and 45-year-olds.

- ***Cocaine*** had generally presented a unique case among the illicit drugs, in that lifetime, annual, and current prevalence rates have *all* tended to rise with age into the 20s. By 1994, however, 30-day cocaine use had reached such low levels that there was little variation by age. Following the resurgence of cocaine use in the 1990s, some differences by age in annual prevalence emerged, though there are still rather few differences for current prevalence (Figure 4-7). Annual prevalence was highest among respondents ages 19 through 35 (at 4–7%) in 2015, with 12th graders a bit lower at 3%; and use was only 1–2% in the age groups beyond 35. The cohort differences in lifetime cocaine use are particularly vivid, with the 50- and 55-year-olds showing 40% and 46% adjusted lifetime prevalence rates, respectively, in 2015, compared to 8% among 21- to 22-year-olds. Very few (0-2%) of the 35- to 55-year-olds today are current users of cocaine, despite the fact that so many of them have used it at least once in their lifetime. Among 55-year olds, 46% used cocaine at some time in their life, but only 0.2% reported using it in the past month. In other words, noncontinuation rates for cocaine are now extremely high.

- In 2015, lifetime prevalence of ***crack*** use (Figure 4-8) was much lower than general cocaine use, and rose fairly steadily between ages 19 to 20 (1%) and age 35 (6%, unadjusted); it was considerably higher among 50- and 55-year-olds (11%, unadjusted), reflecting something of a cohort effect due to the rather transient popularity of crack in the early to mid-1980s and a brief resurgence in the mid-1990s. Current (30-day) prevalence was less than 0.05% in all of these age groups except for 18-year-olds, where it was 0.6%. Annual prevalence also was highest among 18-year-olds at 1.1%, and was between 0.3% and 0.8% for all other age groups. We believe that the prevalence estimates for crack are especially likely to be impacted by the omission of high school dropouts. It seems likely that panel respondents who become dependent on crack (or other illicit drugs like heroin) would be less likely than average to respond to the questionnaires; therefore, such extreme users are no doubt underrepresented among the panel respondents.

- ***MDMA (ecstasy and more recently Molly***) is asked about in four of the six follow-up questionnaire forms. Molly was added as an example in half of the questionnaire forms in 2014 and in all forms in 2015. As Table 5-2 in the next chapter shows, the inclusion of Molly appears to have only raised the annual prevalence estimate in 2014 (when the two versions could be compared) by a little—from 4.8% to 5.1%. In 2015, among all 19- to 30-year-olds combined, 14% said they have tried MDMA, compared to 5.9% of 12th graders. The age differences in *lifetime* MDMA use were quite dramatic, with adjusted prevalence increasing sharply with age stratum and showing the highest rate (18%) at ages 29–30 (Figure 4-17). This very likely reflects the rapid rise in MDMA use among high school seniors between 1997 and 2001, and the subsequent sharp decline in MDMA use in subsequent classes. Because *annual* prevalence was at 5% or below at ages 19–30 in 2015, there clearly has been a high degree of noncontinuation of the use of this drug in this age group. *Thirty-day* MDMA use was at 1% for all age strata between 18 and 30 years in 2015. MDMA use is not asked of those age 35 or older.

- A question about the use of ***salvia*** was introduced into one questionnaire form in 2009 as a single tripwire question asking only the frequency of use in the past twelve months (Table 4-3). Salvia is not currently regulated by the federal government, but a number of states have restrictions on it, and other states are considering restrictions. Salvia has some mild hallucinogenic properties, and there has been considerable attention in the media paid to its potential for harm. Annual prevalence for ages 19 through 30 combined is now very low; it stood at 0.5% in 2015, but prevalence declined with ascending age from 1.9% among 19- to 20-year-olds down to 0.4% among 29- to 30-year-olds. Older respondents are not asked the question.

- *Note: The question about Provigil was dropped in 2012.* Another drug introduced for the first time in the 2009 survey was ***Provigil***, a prescription stay-awake drug. It appears that this drug had not made serious inroads in the young adult population as of 2011, because annual prevalence, as determined by a single tripwire question, was only 0.0–0.4% among those ages 19–30, and showed no clear relationship to age. As a result, the question about Provigil use was dropped in 2012.

- All ***alcohol*** prevalence measures were higher among young adults than among 12th graders, and they generally increased after high school, through at least the mid-20s (Figures 4-20a and 4-20b). Prevalence rates varied only modestly among the older age groups. *Lifetime* prevalence changed very little after ages 27 to 28, due in large part to a "ceiling effect." *Current* 30-day use rose from 35% among 18-year olds to a peak of 75% among 29-30 year olds, then declined slowly through age 55, down to 56% among 55-year-olds. Current ***daily drinking*** (Figure 4-20b) increased gradually and steadily in the young adult years and then changed little past age 35, where it hovered at around 9–11%. Among the various measures of alcohol consumption, ***occasions of heavy drinking*** (i.e., having five or more drinks in a row on at least one occasion in the two weeks prior to the survey, sometimes called "binge drinking") showed some considerable differences by age (Figure 4-20b). There was a large difference between 18-year-olds (17%) and 19- to 20-year-olds (24%) and 21- to 22-year olds (35%). The highest prevalence of such heavy drinking was found among 21- to 26-year-olds (all at 35%). Binge drinking was somewhat lower in the late young-adult years and lower still after age 35, while it was at 29% among 35-year-olds specifically. We have interpreted this curvilinear relationship with age as reflecting an age effect—not a cohort effect—because it seems to replicate across different graduating class cohorts and also because it has been linked directly to age-related events such as leaving the parental home (which increases heavy drinking) and marriage (which decreases it), both of which are, in turn, related to attending college.[11] Clearly, binge drinking is most popular among people in their twenties and falls off after that. Still, substantial fractions of older age groups engage in such drinking (20% to 29% at ages 35–50 and 19% at age 55).

[11]O'Malley, P. M., Bachman, J. G., & Johnston, L. D. (1988). Period, age, and cohort effects on substance use among young Americans: A decade of change, 1976–1986. *American Journal of Public Health, 78*, 1315–1321. See also Bachman, J. G., Wadsworth, K. N., O'Malley, P. M., Johnston, L. D., & Schulenberg, J. E. (1997). *Smoking, drinking, and drug use in young adulthood: The impacts of new freedoms and new responsibilities.* Mahwah, NJ: Lawrence Erlbaum Associates.

Extreme binge drinking is a concept that was introduced into MTF surveys in 2005. Two measures are used; drinking *10 or more drinks* on one or more occasions in the prior two weeks and drinking *15 or more drinks* on one or more occasions in the prior two weeks.[12] The prevalence rate among all young adults of having 10 or more drinks on at least one occasion in the two weeks prior to the survey was 11.1% across the years 2005 to 2015 *combined* or roughly one in every nine respondents. The comparable prevalence for having 15 or more drinks on at least one occasion in the prior two weeks was 4.2% or roughly one in 24 respondents. As with binge drinking at the 5+ drink level, there are differences across age groups among young adults in their extreme binge drinking rates. Both measures of extreme binge drinking were highest among those 21- to 22-years of age (14.0% for 10+ drinks and 5.8% for 15+ drinks): they declined with each higher age band, reaching 9.0% and 2.7%, respectively, by ages 29 to 30. (No figure or table shown.) These questions are not asked of respondents over age 30.

- ***Cigarette smoking*** showed an unusual pattern of age-related differences, influenced to some extent by cohort differences (Figure 4-21). ***Current (30-day) smoking*** rates used to be about the same for 12th graders and those in their early 20s, partly because most initiation of cigarette use happens in high school. Beginning in 2005, however, current smoking was somewhat lower among 12th graders, almost surely due to the sharp drop in smoking that has been occurring among secondary school students—a cohort effect evident as early as 8th grade. Smoking at heavier levels such as a half pack daily was (and has been) higher among those in their 20s than among 12th graders, as many light or moderate smokers in high school transition into a pattern of heavier use after high school.[13] At later ages, a rising proportion of current smokers—that is, those reporting any smoking in the past 30 days—also reported smoking at the daily and half-pack-a-day or more rates. Through age 26 a majority of those indicating any smoking in the prior year were not ***daily*** smokers; the proportion then declined with age so that by age 55 less than a quarter of those who smoked in the prior year were not daily smokers.

 The prevalence of smoking ***half a pack or more*** of cigarettes per day rose from 2% among 18-year-olds to 8% by ages 29–30 and then increased slightly to 9–11% among those 35 and older with one exception—40-year-olds showed "only" a 6% rate. The *proportions* of current smokers who smoked a half-pack or more per day also rose with age: about one fifth among 18 year olds (2% smoking a half-pack or more divided by 11% who are 30-day smokers), about half among 29- to –30-year-olds (8% smoking a half-pack or more divided by 16% who are 30-day smokers), and about three fourths among 55-year-olds (11% smoking a half-pack or more divided by 15% who are 30-day smokers).

[12]Because these two measures have been included in only one of the six questionnaire forms used with young adults, the numbers of cases are very limited, less than 200 weighted cases per year for each two-year age band from 19 to 30. Therefore, we have combined young adult data from years 2005 through 2014 in order to generate more reliable estimates of these behaviors. The weighted combined sample of 18-30 year-olds for 2005 through 2014 has 9.244 observations, with some individuals contributing more than one observation because of their continued participation in the panel study.

[13]Because age is confounded with class cohort, and because we have established that cigarette smoking shows strong cohort effects (enduring differences among cohorts), one must be careful in interpreting age-related differences in a cross-sectional sample as if they were due only to age effects—that is, changes with age consistently observable across cohorts. However, multivariate analyses conducted on MTF panel data from multiple cohorts do show a consistent age effect of the type mentioned here (see O'Malley, Bachman, & Johnston, 1988, in previous footnote).

In essence, lighter smoking (in the past 12 months, but not in the past 30-days) falls off as one moves up the age bands beyond age 25-26, while regular/heavy smoking accounts for increasing proportions of all current smoking.

- Past 30-day prevalence of ***smokeless tobacco*** use stood at 5.2% among all young adults (most of it by males, as will be discussed below) in 2015. Daily prevalence was 2.7% with the highest rate among young adults (9.0%) observed among 19- to 20-year-olds (Tables 4-4 and 4-5).

- Lifetime use of ***electronic vaporizers*** (which include ***e-cigarettes***) is higher among those age 26 and below (at 30–34%) than among those 27–30 years old (at 22–23%), no doubt due to the relatively recent introduction of these products (Table 4-2). It may well be that those in adolescence or early young adulthood are most susceptible to starting to use vaporizers. Among young adults, thirty-day prevalence is highest among those ages 19–20 (13%), next highest among those ages 21–26 (9–10%), and lower among those ages 27–30 (6%).

- Questions have been added recently on the consumption of tobacco in various specific forms other than cigarettes. Tripwire questions were added for these forms of tobacco use in 2011, providing only annual prevalence and frequency data (Table 4-3). Past-year prevalence of use in 2015 among 19- to 30-year-olds was 18% for using a ***hookah to smoke tobacco***, 17% for smoking ***small cigars***, 4% for using ***snus***, and only 0.4% for using ***dissolvable tobacco***. Among young adults, hookah smoking was highest among 19- to 20-year-olds at 24% and declined steadily to 9% at ages 29 to 30. (Rather than being an age effect, this could represent the growing popularity of this practice, which would reflect more of a cohort effect.) Annual prevalence of smoking small cigars was also highest among 19- to 20-year-olds at 21% and lower at increasing ages, dropping to 12% in the 29- to 30-year-old age band. Annual prevalence of use of ***snus*** was at 4.4% among 19- to 30-year-olds and was also highest among the 19- to 20-year-olds at 7% vs. 2-5% among the older age groups. Annual prevalence of ***dissolvable tobacco*** use was only 0.4% among 19- to 30-year-olds, with all age groups at 1.1% or less.

- Questions on ***steroid*** use (Figure 4-18) were added to one questionnaire form in 1989 and to an additional form in 1990, making it difficult to determine age-related differences with much accuracy due to limited sample sizes. Overall, 1.8% of all 19- to 30-year-olds in 2015 reported having used steroids in their lifetime and 0.4% in the prior 12 months. Use did not vary greatly or systematically by age. Questions about steroid use are not asked of respondents over age 30.

In sum, lifetime prevalence rates in some of the older age groups, who passed through adolescence in the heyday of the drug epidemic, showed remarkably high lifetime rates of illicit drug use—particularly when lifetime prevalence was corrected for the recanting of previously reported use. However, *current* use of most illicit drugs was substantially lower among those over age 30 than among those in their late teens to early 20s. For the two licit drugs, alcohol and cigarettes, the picture is different; there is less falloff in active use with age, and there are higher levels of daily alcohol use and regular cigarette smoking in the older ages.

PREVALENCE COMPARISONS FOR SUBGROUPS OF YOUNG ADULTS

Subgroup differences for 19- to 30-year-olds are presented in Tables 4-1 through 4-5. While Table 4-1 provides only gender differences, the remaining tables have prevalence rates by gender, age, region of the country, and population density. Each of these subgroup dimensions is discussed separately below.

Gender Differences

In general, most of the gender differences in drug use that were observed in high school students may be found in the young adult (19- to 30-year-old) sample as well. See Tables 4-1 and 4-3 for the full set of gender comparisons.

- Among the full young adult sample ages 19 to 30, more males than females reported past-year use of ***any illicit drug*** (41% vs. 35%), ***marijuana*** (35% vs. 30%), and ***any illicit drug other than marijuana*** (22% vs. 17%).

- Males had higher annual prevalence rates for nearly all illicit drugs—with ratios of two times greater or more for ***synthetic marijuana, salvia, heroin without a needle, OxyContin, Ritalin, methamphetamine, bath salts, GHB***, ***ketamine,*** and ***steroids*** (Table 4-3).

- With one minor exception, all measures of ***cocaine*** use showed higher rates of use by male than female 19- to 30-year-olds. Annual ***cocaine*** use was reported by 7.7% of males and 3.9% of females, ***powder cocaine*** use by 7.1% of males and 3.6% of females, while ***crack*** use showed almost no gender difference (0.4% of males and 0.5% of females).

- Other large gender differences among 19- to 30-year-olds were found ***in daily marijuana*** use (8.8% for males vs. 4.9% for females)***, daily alcohol*** use (7.6% vs. 3.7%), ***and*** occasions of drinkin***g five or more drinks in a row*** in the prior two weeks (38% vs. 26%).

- There is a particularly large gender difference in the measures of ***extreme binge drinking*** based on years 2005–2015 combined: the rate for having 10 or more drinks on at least one occasion in the prior two weeks was 20.3 % for males vs. 5.6% for females. The rate for having 15 or more drinks in that interval was 8.8% for males and 1.5% for females. (Note that only 2015 data are shown in Table 4-1; but given the low numbers of respondents who were asked about extreme binge drinking, we combined the 2005–2015 data in our above discussion.)

- ***Synthetic marijuana*** use was higher among young adult males than females (1.9% vs. 0.9%), as was use of ***bath salts*** (0.4% vs. 0.2%).

- ***Ecstasy*** (***MDMA***) use was slightly higher among males than among females with annual prevalence of 5.3% and 3.4%, respectively.

- Annual prevalence of use of ***narcotics other than heroin*** outside of medical supervision was also slightly higher among males than females (6.3% versus 4.7%). Use of ***Vicodin***,

one of the most widely used drugs in the class, was 4.3% and 3.5%, respectively. The gender difference for ***OxyContin*** was 3.6% for males vs. 1.8% for females.

- The use of ***amphetamines*** was slightly higher among males than among females with annual prevalence of 9.5% and 6.1%, respectively.

- In the 1980s, there were few differences between males and females in their rates of ***cigarette*** use. By the early 1990s, however, males had slightly higher rates of use. In 2015, 19- to 30-year-old males were more likely than females to have smoked in the past month (20% vs. 14%), to have smoked daily in the past month (12% vs. 9%), and to have smoked half a pack or more per day in the past month (7.1% vs. 5.3%). These gender differences reflect a cohort effect in which the differences between the genders in high school during the 1990s are carried up the age spectrum.

- Among young adults there was a large gender difference in 2015 in the use of ***smokeless tobacco***, with males much more likely than females to have used in the prior month (10.9% vs. 1.7%). Almost all past-year use of ***snus*** occurred among males (9.3% vs. 1.1% among females) as was true for ***dissolvable tobacco*** (0.9% vs. <0.05%, respectively).

- Males were three times as likely to have smoked ***small cigars*** in the past year as females (28% vs. 9%). The same was for past 30-day use of ***regular little cigars*** (6% vs. 2%) and was nearly true for flavored ***little cigars*** (9% vs 4%).

- There was less gender difference in the use of ***hookah*** pipes (20% vs. 16%, respectively).

- ***Steroid*** use among young adults was much more prevalent among males than females, as was true for 12th graders. Among 12th graders in 2015, 2.5% of males reported steroid use in the past year versus 0.7% of females. These statistics were much lower among 19- to 30-year-olds, but use by males remained much higher (0.8% for males vs. 0.1% for females).

Regional Differences

Follow-up respondents are asked in what state they currently reside. States are then grouped into the same regions used in the analysis of high school data.[14] Tables 4-2 through 4-5 present regional differences in lifetime, annual, 30-day, and current daily prevalence **for 19- to 30-year-olds combined.**

- There exist some regional differences in the annual prevalence of ***marijuana*** use, with rates being higher in the Northeast (36%) and West (36%) than the Midwest (31%) and the South (28%). Likewise, regarding annual prevalence of ***any illicit drug*** use, rates were higher in the Northeast (42%) and West (41%) than in the Midwest (35%) and South (34%).

[14]States are grouped into regions as follows: ***Northeast***—Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania; ***Midwest***—Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas; ***South***—Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas; ***West***—Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, and California.

- At present, the use of ***any illicit drug other than marijuana*** (Table 4-3) was highest in the West (22%) and Northeast (20%) and equivalent in the South and Midwest (both at 17%).

- The annual prevalence rate for ***synthetic marijuana*** did not differ significantly by region (Table 4-3).

- The West had higher annual prevalence (4.8%) than the other regions for ***hallucinogen*** use, though the regional differences were not large (Table 4-3). ***LSD*** use was highest in the Midwest and West (2.9% and 2.8% annual prevalence, respectively) while the use of ***hallucinogens other than LSD*** was highest in the West (3.3%).

- For ***ecstasy*** (***MDMA***), annual prevalence was higher in the West (6.1%) and Northeast (4.7%) than in the South and the Midwest (3.5% and 2.6%).

- For the remaining ***illicit drugs***, regional differences in 2015 were not substantial (Tables 4-3 and 4-4).

- Prevalence rates for ***alcohol us***e are typically somewhat higher in the Northeast and Midwest regions than in the South and West; this pattern still pertains and has generally been true among 12th graders as well. For ***binge drinking*** among 19- to 30-year-olds, the Northeast and Midwest were at 34% and 37% respectively, with the South at 27% and the West at 26%. Self-reported ***drunkenness*** showed a similar pattern, as would be expected.

- ***Cigarette smoking*** among young adults was fairly evenly distributed across three of the four regions, with 30-day prevalence ranging from 16% to 18% in the Northeast, South, and Midwest; the West was lower, at 12% (Table 4-4). Smoking a half pack or more per day was distinctly lower in the West at 2.4% versus a range of 6.6% to 7.5% in the other three regions (Table 4-5).

- Use of ***flavored little cigars*** (Table 4-4) was highest in the Northeast with a 30-day prevalence of 7.4% and lowest in the South (3.8%). The use of ***regular little cigars*** **(**i.e., non-flavored) was highest in the West (with a 30-day prevalence of 5%), followed by the Midwest (4%), the Northeast (3%), and the South (2%).

- Annual prevalence for the use of ***large cigars*** was highest in the Midwest (7.3%) and West (6.3%) and lower in the South (4.4%) and Northeast (3.3%, Table 4-3).

- The 30-day prevalence of ***smokeless tobacco*** use (Table 4-4) among young adults remained higher in the South (7%) and Midwest (6%) than in the West (4%) and Northeast (2%).

- The use of ***snus*** in the prior year was also highest in the Midwest and South, while use in the prior year of a ***hookah*** to smoke tobacco was highest in the Midwest (21%) and about equivalent in the other three regions (15–17%). (See Table 4-3.)

Population Density Differences

Population density is measured by asking respondents to select the response category that best describes the size and nature of the community where they lived during March of the year in which they completed the follow-up questionnaire. The various categories are listed in Tables 4-2 through 4-5; the population sizes given to the respondent to help define each level are provided in a footnote to each table. An examination of the 1987 and 1988 drug use data for the two most urban strata revealed that the modest differences in prevalence rates between the suburbs and their corresponding cities were not worth the complexity of reporting them separately; accordingly, since then these categories have been merged to increase sample sizes. See Tables 4-2 through 4-5 for the tabular results on **19- to 30-year-olds combined**.

- Differences in illicit drug use by population density tend to be very modest, perhaps more modest than is commonly supposed. Among the general population, use of most illicit drugs is broadly distributed among all areas from rural to urban. To the extent that there are variations, almost all of the associations are positive, with rural/country areas having the lowest levels of use, and small towns having the next lowest. Medium-sized cities, large cities, and very large cities tend to be higher, with only small variations among them. Positive associations with population density exist for annual prevalence of ***any illicit drug***, ***any illicit drug other than marijuana, marijuana***, ***hallucinogens other than LSD, ecstasy*** (***MDMA***), ***cocaine, crack***, ***powder cocaine***, ***OxyContin, amphetamines, Ritalin and Adderall*** specifically, and ***tranquilizers***. The association was strongest for ***cocaine*** in 2015, where the annual prevalence rate in the very large cities (9.5%) was more than two times that in farm/country (3.4%).

- The use of ***bath salts, salvia, synthetic marijuana, sedatives, GHB, Ketamine, and steroids*** does not vary significantly by population density.

- In 2015 annual prevalence of ***methamphetamine*** use was highest in the farm/country (1.4%) and large city (1.3%) strata, with relatively little difference among the other strata (Table 4-3).

- Among young adults, the lifetime and annual ***alcohol*** use measures all showed a slight positive association with population density, while 30-day use had a somewhat stronger positive association, with 59% of the farm/country stratum reporting alcohol use in the prior 30 days versus 77% of those in very large cities.

 Occasions of heavy drinking were positively associated with population density as well (Table 4-5), with 29% of those in the farm/country stratum indicating having had five or more drinks in a row at least once in the prior two weeks compared to 39% of those in the very large cities. ***Daily alcohol use*** in the prior month was also slightly positively associated with population density in 2015 with 5.6% of young adults in the farm/country stratum indicating daily use versus 6.9% in the very large cities.

- Contrary to what we find for almost all other substances, there exists a negative association between population density and ***daily cigarette smoking***, which was highest in the farm/country stratum (daily prevalence of 16%) and lowest in the large and very large cities

(daily prevalence rates of 9% and 6%, respectively). Smoking at the half-pack-a-day level in the prior 30 days was about three and one-half times as high in the farm/country stratum as in very large cities (10% vs. 3%, respectively; Table 4-5).

- The use of ***small cigars*** in the prior year was fairly evenly distributed across all population density strata (ranging from 14.7% to 18.0%).

- Use of ***flavored little cigars*** in the prior 30-days was highest in the farm/country stratum (10%) and lower in all other strata (3% to 7%), whereas use of ***regular little cigars*** was highest in the medium-sized cities (6%) and lower in the other strata (3% to 4%).

- ***Hookah*** smoking was higher in the cities of all sizes (from 19% to 21% using in the prior year) than in the small town (14%) or farm/country strata (8%).

- On the other hand, ***smokeless tobacco*** use was lowest in the most urban stratum (with 30-day prevalence rates of 3%) and highest in the farm/country stratum (13%). See Table 4-4.

- The use of ***snus*** by young adults varied rather little by populations density but tended to be higher in the large cities (6% annual prevalence) and farm/country strata (5% annual prevalence) versus 4% in the other two strata (Table 4-3).

TABLE 4-1
Prevalence of Use of Various Types of Drugs by Gender among Respondents of Modal Ages 19–30, 2015

(Entries are percentages.)

	Males	Females	Total
Approximate Weighted N =	*1,900*	*2,900*	*4,700*
Any Illicit Drug [a]			
Annual	41.0	35.0	37.4
30-Day	25.8	19.4	22.0
Any Illicit Drug other than Marijuana [a]			
Annual	22.3	16.6	18.9
30-Day	10.1	7.0	8.2
Marijuana			
Annual	35.3	30.1	32.1
30-Day	23.0	16.3	19.0
Daily [b]	8.8	4.9	6.5
Synthetic Marijuana			
Annual [c]	1.3	1.9	0.9
30-Day [d]	0.6	1.0	0.4
Inhalants [c]			
Annual	0.7	0.9	0.8
30-Day	0.1	0.2	0.2
Hallucinogens [e]			
Annual	5.3	3.1	4.0
30-Day	1.3	0.7	0.9
LSD [e]			
Annual	3.2	1.8	2.4
30-Day	0.8	0.4	0.6
Hallucinogens other than LSD [e]			
Annual	4.2	2.0	2.9
30-Day	0.6	0.4	0.5
PCP [d]			
Annual	*	*	*
30-Day	*	*	*
Ecstasy (MDMA) [f]			
Annual	5.3	3.4	4.2
30-Day	1.0	0.8	0.9
Cocaine			
Annual	7.7	3.9	5.4
30-Day	2.5	1.0	1.6
Crack [e]			
Annual	0.4	0.5	0.4
30-Day	0.1	0.1	0.1
Other Cocaine [f]			
Annual	7.1	3.6	5.0
30-Day	2.2	0.9	1.4
Heroin			
Annual	0.6	0.5	0.5
30-Day	0.2	0.3	0.3
With a Needle [g]			
Annual	0.5	0.2	0.3
30-Day	0.2	0.2	0.2
Without a Needle [g]			
Annual	0.6	0.5	0.5
30-Day	0.1	0.3	0.2

(Table continued on next page.)

TABLE 4-1 (cont.)
Prevalence of Use of Various Types of Drugs by Gender among Respondents of Modal Ages 19–30, 2015

(Entries are percentages.)

	Males	Females	Total
Approximate Weighted N =	*1,900*	*2,900*	*4,700*
Narcotics other than Heroin [h]			
Annual	6.3	4.7	5.3
30-Day	2.0	1.7	1.8
Amphetamines, Adjusted [h,i]			
Annual	9.5	6.1	7.4
30-Day	3.9	2.2	2.9
Methamphetamine [g]			
Annual	1.0	0.5	0.7
30-Day	0.2	0.4	0.3
Crystal Methamphetamine (Ice) [g]			
Annual	0.4	0.5	0.5
30-Day	0.2	0.3	0.2
Bath Salts (Synthetic Stimulants) [c]			
Annual	0.3	0.4	0.2
Sedatives (Barbiturates) [h]			
Annual	3.0	2.4	2.6
30-Day	0.5	1.0	0.8
Tranquilizers [h]			
Annual	5.4	5.1	5.2
30-Day	1.8	1.6	1.7
Alcohol			
Annual	82.6	82.2	82.4
30-Day	71.5	65.9	68.1
Daily [b]	7.6	3.7	5.2
5+ Drinks in a Row in Last 2 Weeks	38.8	26.3	31.3
10+ Drinks in a Row in Last 2 Weeks [d]	18.7	4.0	9.5
15+ Drinks in a Row in Last 2 Weeks [d]	7.0	0.5	3.0
Been Drunk [c]			
Annual	66.3	58.7	61.8
30-Day	40.2	29.7	33.9
Daily [b]	0.6	0.2	0.4
Flavored Alcoholic Beverages [d]			
Annual	48.9	59.4	55.2
30-Day	18.6	26.2	23.2
Cigarettes			
Annual	29.6	22.5	25.3
30-Day	20.1	14.1	16.5
Daily	11.6	8.8	9.9
1/2 Pack+/Day	7.1	5.3	6.0
Smokeless Tobacco [d]			
Lifetime	39.2	14.0	23.8
30-Day	10.9	1.7	5.2
Daily	5.4	1.1	2.7
Steroids [g]			
Annual	0.8	0.1	0.4
30-Day	0.2	*	0.1

(Table continued on next page.)

TABLE 4-1 (cont.)
Prevalence of Use of Various Types of Drugs by Gender among Respondents of Modal Ages 19–30, 2015

Source. The Monitoring the Future study, the University of Michigan.

Notes. ' * ' indicates a prevalence rate of less than 0.05%.

[a]Use of any illicit drug includes any use of marijuana, hallucinogens, cocaine, heroin or other narcotics, amphetamines, sedatives (barbiturates), or tranquilizers not under a doctor's orders.

[b]Daily use is defined as use on 20 or more occasions in the past 30 days except for cigarettes, measured as actual daily use, and 5+ drinks, measured as having five or more drinks in a row in the last two weeks.

[c]This drug was asked about in three of the six questionnaire forms. Total *N* is approximately 2,400.

[d]This drug was asked about in one of the six questionnaire forms. Total *N* is approximately 800.

[e]This drug was asked about in five of the six questionnaire forms. Total *N* is approximately 3,900.

[f]This drug was asked about in four of the six questionnaire forms. Total *N* is approximately 3,100.

[g]This drug was asked about in two of the six questionnaire forms. Total *N* is approximately 1,600.

[h]Only drug use that was not under a doctor's orders is included here.

[i]Based on data from the revised question, which attempts to exclude the inappropriate reporting of nonprescription amphetamines.

TABLE 4-2
Lifetime Prevalence of Use of Various Types of Drugs by Subgroups among Respondents of Modal Ages 19–30, 2015

(Entries are percentages.)

	Approximate Weighted N	Any Illicit Drug [a]	Any Illicit Drug other than Marijuana [a]	Marijuana	Inhalants [b]	Hallucinogens [d]	LSD [d]	Hallucinogens other than LSD [d]	PCP [c]	Ecstasy (MDMA) [f]	Cocaine	Crack [d]
Total	*4,700*	64.5	38.3	59.8	6.8	12.4	7.0	11.2	1.6	13.6	13.1	2.1
Gender												
Male	*1,900*	66.6	41.5	61.9	8.2	17.1	9.9	16.1	1.7	16.2	16.6	2.3
Female	*2,900*	63.2	36.1	58.4	5.8	9.3	5.1	7.9	1.5	11.9	10.8	2.0
Modal Age												
19–20	*800*	51.3	23.6	48.7	4.5	6.1	4.5	4.6	1.1	8.0	6.1	0.9
21–22	*800*	60.1	34.2	57.0	4.8	9.9	7.1	8.3	*	12.2	7.9	1.2
23–24	*800*	66.2	39.0	60.6	7.6	11.8	7.5	10.6	1.2	14.4	14.0	1.6
25–26	*800*	68.0	42.2	63.7	7.9	14.1	8.2	13.2	0.9	15.7	15.2	2.5
27–28	*800*	69.2	45.1	62.9	7.3	16.6	7.6	15.6	2.7	14.5	17.4	2.9
29–30	*700*	73.0	46.2	66.7	8.9	16.2	7.2	15.4	3.9	17.1	18.4	3.6
Region												
Northeast	*900*	67.1	37.9	62.8	6.8	13.5	8.1	11.9	1.0	13.0	14.7	1.6
Midwest	*1,300*	63.4	36.5	59.0	6.2	12.8	8.2	11.7	1.0	11.6	10.7	1.9
South	*1,500*	62.8	37.4	57.1	6.4	10.6	5.6	9.3	2.6	12.1	11.8	2.2
West	*1,000*	66.0	41.5	61.7	8.2	13.0	6.6	12.1	1.2	18.5	16.0	2.7
Population Density [e]												
Farm/Country	*400*	57.3	34.1	52.9	4.9	11.8	7.1	10.6	0.8	6.3	9.6	2.3
Small Town	*1,200*	60.7	35.9	56.2	7.4	11.6	6.6	10.3	1.7	11.6	11.3	2.2
Medium City	*1,200*	64.8	35.9	59.2	5.3	10.8	6.5	9.9	1.6	11.7	11.0	1.9
Large City	*1,100*	65.9	40.8	61.3	8.5	13.7	7.7	11.9	2.6	17.0	14.9	2.2
Very Large City	*700*	72.4	43.7	68.0	6.6	13.8	6.8	13.4	*	18.1	18.3	1.9

(Table continued on next page.)

TABLE 4-2 (cont.)
Lifetime Prevalence of Use of Various Types of Drugs by Subgroups among Respondents of Modal Ages 19–30, 2015

(Entries are percentages.)

	Approximate Weighted N	Other Cocaine [f]	Heroin	Heroin with a Needle [g]	Heroin without a Needle [g]	Narcotics other than Heroin [h]	Amphetamines [h,i]	Methamphetamine [g]	Crystal Methamphetamine (Ice) [g]
Total	*4,700*	12.5	1.6	0.8	2.0	16.5	19.3	2.9	2.7
Gender									
Male	*1,900*	15.4	2.1	1.2	2.6	19.6	22.7	3.1	3.3
Female	*2,900*	10.7	1.4	0.5	1.6	14.5	17.0	2.8	2.3
Modal Age									
19–20	*800*	5.7	0.4	0.2	0.5	7.3	12.1	0.9	0.6
21–22	*800*	7.6	0.8	0.6	1.6	11.5	17.1	1.1	1.8
23–24	*800*	13.6	2.2	0.7	2.1	15.2	20.4	2.7	2.0
25–26	*800*	15.5	2.2	0.9	2.2	19.2	21.2	2.9	3.3
27–28	*800*	17.0	2.4	1.1	2.6	22.4	23.6	4.5	3.0
29–30	*700*	16.3	1.9	1.3	2.9	24.3	21.7	5.8	5.8
Region									
Northeast	*900*	14.0	2.2	1.0	2.9	15.6	18.6	2.0	0.2
Midwest	*1,300*	9.3	1.5	1.0	2.1	16.2	20.0	1.8	2.3
South	*1,500*	11.7	1.2	0.5	1.3	17.1	19.0	3.7	2.8
West	*1,000*	15.6	1.8	0.4	1.6	16.8	19.0	4.1	5.2
Population Density [e]									
Farm/Country	*400*	9.6	1.5	0.5	0.8	16.2	14.1	4.2	2.5
Small Town	*1,200*	10.2	1.3	0.5	1.9	15.8	16.3	3.8	3.1
Medium City	*1,200*	10.0	1.5	0.4	1.5	15.3	18.0	1.7	1.9
Large City	*1,100*	14.2	1.9	1.4	2.1	18.2	21.7	3.2	3.2
Very Large City	*700*	18.9	1.9	0.4	2.5	16.7	25.3	2.6	2.9

(Table continued on next page.)

TABLE 4-2 (cont.)
Lifetime Prevalence of Use of Various Types of Drugs by Subgroups among Respondents of Modal Ages 19–30, 2015

(Entries are percentages.)

	Approximate Weighted N	Sedatives (Barbiturates) [h]	Tranquilizers [h]	Alcohol	Been Drunk [b]	Flavored Alcoholic Beverages [c]	Cigarettes	Electronic Vaporizers [g]	Smokeless Tobacco [c]	Steroids [g]
Total	*4,700*	8.9	13.8	87.1	78.3	82.6	—	29.1	23.8	1.8
Gender										
Male	*1,900*	10.5	14.2	86.7	79.1	76.7	—	35.3	39.2	3.8
Female	*2,900*	7.8	13.4	87.5	77.9	86.4	—	25.3	14.0	0.5
Modal Age										
19–20	*800*	4.5	8.3	72.6	61.9	66.4	—	33.7	26.3	0.1
21–22	*800*	6.8	9.4	87.4	73.8	81.8	—	31.2	0.3	1.4
23–24	*800*	9.6	12.7	88.7	82.5	84.6	—	30.4	11.8	1.4
25–26	*800*	9.4	15.5	88.9	82.8	84.7	—	32.2	28.5	4.4
27–28	*800*	11.5	18.2	91.2	80.7	89.0	—	23.4	33.7	0.5
29–30	*700*	11.9	19.1	95.1	88.9	89.8	—	22.4	40.6	2.6
Region										
Northeast	*900*	7.1	12.9	89.7	83.5	87.1	—	27.4	16.1	1.2
Midwest	*1,300*	8.9	12.8	90.6	83.4	86.6	—	32.8	24.1	1.1
South	*1,500*	9.5	14.8	85.3	75.3	77.2	—	26.2	27.2	2.5
West	*1,000*	9.4	13.9	82.9	71.5	81.1	—	29.5	23.4	2.0
Population Density [e]										
Farm/Country	*400*	6.7	11.6	85.8	79.0	73.0	—	32.1	31.3	2.2
Small Town	*1,200*	8.8	13.3	84.1	75.0	77.0	—	30.8	24.0	0.8
Medium City	*1,200*	8.2	12.4	86.8	77.7	85.0	—	26.7	17.0	2.4
Large City	*1,100*	10.1	14.7	89.0	78.4	84.9	—	26.7	24.7	1.1
Very Large City	*700*	9.6	16.6	91.5	85.7	91.8	—	30.9	29.3	2.9

Source. The Monitoring the Future study, the University of Michigan.

Notes. ' — ' indicates data not available.

[a]Use of any illicit drug includes any use of marijuana, hallucinogens, cocaine, heroin or other narcotics, amphetamines, sedatives (barbiturates), or tranquilizers not under a doctor's orders.

[b]This drug was asked about in three of the six questionnaire forms. Total *N* is approximately 2,400.

[c]This drug was asked about in one of the six questionnaire forms. Total *N* is approximately 800.

[d]This drug was asked about in five of the six questionnaire forms. Total *N* is approximately 3,900.

[e]A small town is defined as having fewer than 50,000 inhabitants; a medium city as 50,000–100,000; a large city as 100,000–500,000; and a very large city as having over 500,000. Within each level of population density, suburban and urban respondents are combined.

[f]This drug was asked about in four of the six questionnaire forms. Total *N* is approximately 3,100.

[g]This drug was asked about in two of the six questionnaire forms. Total *N* is approximately 1,600.

[h]Only drug use that was not under a doctor's orders is included here.

[i]Based on data from the revised question, which attempts to exclude the inappropriate reporting of nonprescription amphetamines.

TABLE 4-3
Annual Prevalence of Use of Various Types of Drugs by Subgroups among Respondents of Modal Ages 19–30, 2015

(Entries are percentages.)

	Approximate Weighted N	Any Illicit Drug [a]	Any Illicit Drug other than Marijuana [a]	Marijuana	Synthetic Marijuana [c]	Inhalants [c]	Hallucinogens [e]	Hallucinogens LSD [e]	Hallucinogens other than LSD [e]	PCP [d]	Ecstasy (MDMA) [f]	Salvia [c]	Cocaine	Crack [e]
Total	*4,700*	37.4	18.9	32.1	1.3	0.8	4.0	2.4	2.9	*	4.2	0.5	5.4	0.4
Gender														
Male	*1,900*	41.0	22.3	35.3	1.9	0.7	5.3	3.2	4.2	*	5.3	1.1	7.7	0.4
Female	*2,900*	35.0	16.6	30.1	0.9	0.9	3.1	1.8	2.0	*	3.4	0.1	3.9	0.5
Modal Age														
19–20	*800*	40.6	15.6	38.6	3.3	1.2	4.6	3.1	3.5	*	5.2	1.9	4.5	0.4
21–22	*800*	42.0	21.6	37.8	0.9	0.6	5.6	4.1	3.4	*	4.2	0.1	4.7	0.4
23–24	*800*	41.2	22.5	32.7	0.9	1.3	3.4	2.1	2.4	*	4.8	0.3	7.0	0.5
25–26	*800*	38.1	19.7	33.5	1.1	1.3	4.6	2.9	3.2	*	4.5	0.1	6.9	0.6
27–28	*800*	33.9	18.2	26.9	1.1	*	2.9	0.9	2.5	*	3.5	0.4	5.2	0.3
29–30	*700*	27.5	15.5	22.2	0.4	0.3	2.7	1.1	2.3	*	2.6	0.4	3.7	0.5
Region														
Northeast	*900*	41.9	20.1	36.2	1.6	0.8	3.9	2.2	2.7	*	4.7	0.6	7.0	0.4
Midwest	*1,300*	35.4	17.0	31.3	0.9	0.5	3.9	2.9	2.8	*	2.6	*	3.9	0.4
South	*1,500*	33.8	17.2	28.0	1.8	0.8	3.1	1.6	2.4	*	3.5	0.7	4.2	0.2
West	*1,000*	41.1	22.0	35.6	0.6	1.2	4.8	2.8	3.3	*	6.1	0.7	7.1	0.9
Population Density [j]														
Farm/Country	*400*	25.6	12.5	21.2	1.8	0.6	4.1	2.7	2.9	*	1.0	*	3.4	0.2
Small Town	*1,200*	34.3	16.3	29.5	1.8	1.1	3.3	2.0	2.4	*	3.5	0.4	3.6	0.3
Medium City	*1,200*	37.9	18.5	32.9	1.0	0.5	3.1	2.2	2.2	*	3.7	0.7	4.5	0.4
Large City	*1,100*	38.9	21.0	33.7	0.6	0.6	4.5	2.1	3.4	*	5.0	0.5	6.2	0.7
Very Large City	*700*	44.9	23.6	38.2	1.4	1.0	5.1	3.0	3.7	*	5.9	0.8	9.5	0.7

(Table continued on next page.)

TABLE 4-3 (cont.)
Annual Prevalence of Use of Various Types of Drugs by Subgroups among Respondents of Modal Ages 19–30, 2015

(Entries are percentages.)

	Approximate Weighted N	Other Cocaine [f]	Heroin	Heroin with a Needle [b]	Heroin without a Needle [b]	Narcotics other than Heroin [g]	OxyContin [c,g]	Vicodin [c,g]	Amphetamines [g,h]	Ritalin [g,h]	Adderall [c,g]	Methamphetamine [b]	Crystal Methamphetamine (Ice) [b]
Total	*4,700*	5.0	0.5	0.3	0.5	5.3	2.5	3.8	7.4	1.6	6.9	0.7	0.5
Gender													
Male	*1,900*	7.1	0.6	0.5	0.6	6.3	3.6	4.3	9.5	2.5	9.3	1.0	0.4
Female	*2,900*	3.6	0.5	0.2	0.5	4.7	1.8	3.5	6.1	0.9	5.3	0.5	0.5
Modal Age													
19–20	*800*	3.5	0.2	*	0.3	3.6	3.3	2.3	7.6	2.6	7.8	0.9	*
21–22	*800*	5.1	0.3	0.2	0.5	4.7	1.8	3.5	10.6	1.2	10.9	0.4	0.4
23–24	*800*	6.5	0.8	0.4	0.5	6.4	2.4	5.1	8.4	2.6	8.4	0.8	0.4
25–26	*800*	6.3	0.7	0.2	0.8	5.9	2.8	3.6	7.4	1.4	7.2	0.5	1.2
27–28	*800*	5.6	0.5	0.5	0.2	5.4	2.2	4.6	5.4	1.1	4.0	0.7	0.3
29–30	*700*	2.8	0.6	0.6	0.9	6.0	2.6	3.9	5.0	0.4	3.0	0.9	0.6
Region													
Northeast	*900*	6.6	1.0	0.5	1.0	4.7	3.1	4.6	7.6	0.9	7.2	*	*
Midwest	*1,300*	3.7	0.4	0.3	0.4	6.1	1.5	4.5	7.2	2.0	7.1	0.3	0.4
South	*1,500*	4.0	0.4	0.1	0.2	5.1	3.1	2.2	7.5	1.2	7.2	0.7	0.8
West	*1,000*	6.6	0.5	0.2	0.6	5.3	2.1	4.2	7.2	1.6	5.6	1.8	0.6
Population Density [j]													
Farm/Country	*400*	2.9	0.1	*	*	4.1	1.4	1.0	3.7	0.6	1.7	1.4	0.9
Small Town	*1,200*	3.1	0.6	0.4	0.8	5.0	2.5	4.7	6.1	1.2	5.7	0.9	0.8
Medium City	*1,200*	3.7	0.4	*	0.2	5.4	2.4	3.9	7.6	1.6	7.1	*	0.2
Large City	*1,100*	6.6	0.5	0.4	0.4	6.1	2.5	3.8	8.5	1.6	8.5	1.3	0.4
Very Large City	*700*	9.1	0.7	0.2	0.7	5.1	3.1	3.7	9.1	2.3	8.4	0.5	0.5

(Table continued on next page.)

TABLE 4-3 (cont.)
Annual Prevalence of Use of Various Types of Drugs by Subgroups among Respondents of Modal Ages 19–30, 2015

(Entries are percentages.)

	Approximate Weighted N	Bath Salts (synthetic stimulants) [c]	Sedatives (Barbiturates) [g]	Tranquilizers [g]	GHB [b]	Ketamine [b]	Alcohol	Been Drunk [c]	Flavored Alcoholic Beverages [d]	Alcoholic Beverages containing Caffeine [b]	Cigarettes	Tobacco using a Hookah [c]	Small Cigars [b]	Dissolvable Tobacco [b]	Snus [b]	Steroids [g]
Total	*4,700*	0.3	2.6	5.2	0.2	0.6	82.4	61.8	55.2	31.7	25.3	17.5	16.6	0.4	4.4	0.4
Gender																
Male	*1,900*	0.4	3.0	5.4	0.5	1.1	82.6	66.3	48.9	39.3	29.6	19.8	27.5	0.9	9.3	0.8
Female	*2,900*	0.2	2.4	5.1	0.1	0.2	82.2	58.7	59.4	26.4	22.5	16.0	9.2	*	1.1	0.1
Modal Age																
19–20	*800*	0.8	2.1	4.7	0.3	1.0	67.9	53.3	52.5	29.3	24.7	23.8	20.6	0.3	7.1	0.3
21–22	*800*	*	3.5	4.9	0.4	1.1	84.3	62.9	69.6	37.5	26.3	23.4	18.1	1.1	4.7	0.4
23–24	*800*	0.3	3.1	5.6	*	0.5	85.0	68.5	66.4	42.3	26.8	19.9	19.3	0.1	3.1	0.5
25–26	*800*	0.3	2.5	5.2	*	0.4	83.7	62.9	49.3	33.9	27.5	15.2	14.9	0.1	4.9	1.1
27–28	*800*	0.4	2.3	4.8	0.4	0.4	85.8	58.2	49.5	24.4	25.7	13.5	14.6	0.4	4.1	*
29–30	*700*	*	2.2	6.1	0.4	*	88.4	64.8	45.5	21.4	20.3	8.5	11.7	0.2	2.0	*
Region																
Northeast	*900*	*	2.3	5.4	*	0.8	87.2	67.7	59.3	30.3	24.7	17.0	13.9	*	2.7	*
Midwest	*1,300*	0.2	2.8	5.3	*	*	86.2	66.2	58.9	38.0	27.3	21.1	21.3	0.5	7.2	0.6
South	*1,500*	0.5	2.5	5.2	0.5	0.8	79.2	57.6	51.9	29.3	26.0	14.5	16.1	0.5	3.8	0.2
West	*1,000*	0.1	2.7	5.1	0.1	0.5	77.6	56.7	51.4	28.3	21.9	17.0	14.2	0.4	2.7	0.6
Population Density [i]																
Farm/Country	*400*	0.5	2.0	3.2	*	0.3	77.6	52.1	48.1	29.5	31.3	8.3	14.7	0.2	4.7	0.7
Small Town	*1,200*	0.1	2.7	4.9	0.3	0.9	78.8	59.2	53.5	28.1	25.5	14.2	17.3	0.4	3.7	*
Medium City	*1,200*	*	2.1	4.7	*	0.1	81.8	61.2	57.8	31.9	24.0	21.0	15.1	0.1	4.1	0.8
Large City	*1,100*	0.4	3.1	6.4	0.4	0.5	85.5	62.4	58.1	32.0	24.2	18.9	18.0	0.7	5.8	*
Very Large City	*700*	0.5	3.0	6.2	0.4	1.0	88.0	71.6	52.7	36.1	24.7	20.3	18.0	0.4	3.4	0.9

Source. The Monitoring the Future study, the University of Michigan.

Notes. ' * ' indicates a prevalence rate of less than 0.05%.

[a]Use of any illicit drug includes any use of marijuana, hallucinogens, cocaine, heroin or other narcotics, amphetamines, sedatives (barbiturates), or tranquilizers not under a doctor's orders.

[b]This drug was asked about in two of the six questionnaire forms. Total *N* is approximately 1,700.

[c]This drug was asked about in three of the six questionnaire forms. Total *N* is approximately 2,500.

[d]This drug was asked about in one of the six questionnaire forms. Total *N* is approximately 800.

[e]This drug was asked about in five of the six questionnaire forms. Total *N* is approximately 4,200.

[f]This drug was asked about in four of the six questionnaire forms. Total *N* is approximately 3,400.

[g]Only drug use that was not under a doctor's orders is included here.

[i]Based on data from the revised question, which attempts to exclude the inappropriate reporting of nonprescription amphetamines.

[j]A small town is defined as having fewer than 50,000 inhabitants; a medium city as 50,000–100,000; a large city as 100,000–500,000; and a very large city as having over 500,000.

Within each level of population density, suburban and urban respondents are combined.

TABLE 4-4
Thirty-Day Prevalence of Use of Various Types of Drugs by Subgroups among Respondents of Modal Ages 19–30, 2015

(Entries are percentages.)

	Approximate Weighted N	Any Illicit Drug [a]	Any Illicit Drug other than Marijuana	Marijuana	Synthetic Marijuana [c]	Inhalants [b]	Hallucinogens [d]	LSD [d]	Hallucinogens other than LSD [d]	PCP [c]	Ecstasy (MDMA) [f]	Cocaine	Crack [d]
Total	*4,700*	22.0	8.2	19.0	0.6	0.2	0.9	0.6	0.5	*	0.9	1.6	0.1
Gender													
Male	*1,900*	25.8	10.1	23.0	1.0	0.1	1.3	0.8	0.6	*	1.0	2.5	0.1
Female	*2,900*	19.4	7.0	16.3	0.4	0.2	0.7	0.4	0.4	*	0.8	1.0	0.1
Modal Age													
19–20	*800*	23.8	6.7	22.6	2.0	0.1	1.6	0.9	0.9	*	1.0	1.4	*
21–22	*800*	26.4	11.6	22.5	0.3	0.1	1.3	0.9	0.5	*	1.0	1.3	0.2
23–24	*800*	24.5	10.4	19.0	*	0.5	0.7	0.5	0.7	*	0.6	2.7	0.2
25–26	*800*	22.6	7.2	20.7	0.9	0.2	1.0	0.7	0.3	*	0.7	2.0	0.1
27–28	*800*	18.8	7.8	15.4	0.3	*	0.7	0.5	0.2	*	0.8	1.1	*
29–30	*700*	15.1	5.8	12.8	*	0.1	0.2	*	0.2	*	1.2	0.9	*
Region													
Northeast	*900*	24.2	9.5	19.5	0.6	0.1	0.6	0.2	0.4	*	0.9	2.7	0.2
Midwest	*1,300*	20.2	7.2	17.8	0.4	*	1.2	0.9	0.5	*	0.6	0.8	0.1
South	*1,500*	19.5	7.5	16.5	0.8	0.2	0.7	0.5	0.3	*	0.6	1.1	*
West	*1,000*	25.4	8.8	23.1	*	0.2	0.9	0.5	0.5	*	1.5	2.2	0.1
Population Density [e]													
Farm/Country	*400*	14.1	4.7	11.0	*	0.2	0.6	*	0.6	*	*	0.5	*
Small Town	*1,200*	20.2	7.4	16.9	*	0.1	0.4	0.2	0.2	*	0.8	0.8	0.1
Medium City	*1,200*	21.4	7.7	19.0	0.9	0.2	1.2	0.8	0.6	*	1.1	1.5	0.1
Large City	*1,100*	24.1	9.1	21.3	1.1	0.2	0.9	0.7	0.3	*	0.7	1.7	*
Very Large City	*700*	25.2	10.2	21.9	0.3	*	1.1	0.7	0.8	*	1.0	3.6	0.2

(Table continued on next page.)

TABLE 4-4 (cont.)
Thirty-Day Prevalence of Use of Various Types of Drugs by Subgroups among Respondents of Modal Ages 19–30, 2015

(Entries are percentages.)

	Approximate Weighted N	Other Cocaine [f]	Heroin	Heroin With Needle [g]	Heroin Without Needle [g]	Narcotics other than Heroin [h]	Amphetamines [h,i]	Methamphetamine [g]	Crystal Methamphetamine (Ice) [g]
Total	*4,700*	1.4	0.3	0.2	0.2	1.8	2.9	0.3	0.2
Gender									
Male	*1,900*	2.2	0.2	0.2	0.1	2.0	3.9	0.2	0.2
Female	*2,900*	0.9	0.3	0.2	0.3	1.7	2.2	0.4	0.3
Modal Age									
19–20	*800*	1.1	*	*	*	0.9	2.9	*	*
21–22	*800*	1.7	0.2	*	0.2	2.2	4.8	0.4	0.4
23–24	*800*	2.3	0.6	0.4	0.5	2.4	3.0	0.4	*
25–26	*800*	1.6	0.5	0.2	0.4	1.5	2.9	0.2	0.7
27–28	*800*	1.4	0.3	0.5	0.2	2.1	1.9	0.7	0.2
29–30	*700*	0.3	0.1	*	*	1.6	1.8	0.1	*
Region									
Northeast	*900*	2.0	0.7	0.3	0.3	2.0	3.4	*	*
Midwest	*1,300*	0.5	0.1	*	0.1	1.8	2.6	0.2	0.4
South	*1,500*	1.0	0.2	0.1	*	1.8	2.9	0.3	0.2
West	*1,000*	2.4	0.3	0.2	0.3	1.4	2.5	0.6	0.3
Population Density [e]									
Farm/Country	*400*	0.8	*	*	*	1.0	1.6	0.7	*
Small Town	*1,200*	0.8	0.3	0.2	0.2	2.2	2.8	0.7	0.7
Medium City	*1,200*	1.1	0.3	*	0.2	1.9	2.5	*	0.1
Large City	*1,100*	1.8	0.2	0.1	0.1	1.6	3.5	0.1	*
Very Large City	*700*	2.8	0.4	0.2	*	1.3	2.8	0.2	0.2

(Table continued on next page.)

TABLE 4-4 (cont.)
Thirty-Day Prevalence of Use of Various Types of Drugs by Subgroups among Respondents of Modal Ages 19–30, 2015

(Entries are percentages.)

	Approximate Weighted N	Sedatives (Barbiturates) [h]	Tranquilizers [h]	Alcohol	Been Drunk [b]	Flavored Alcoholic Beverages [c]	Cigarettes	Electronic Vaporizers [g]	Large Cigars [c]
Total	*4,700*	0.8	1.7	68.1	33.9	23.2	16.5	8.7	5.4
Gender									
Male	*1,900*	0.5	1.8	71.5	40.2	18.6	20.1	11.8	9.8
Female	*2,900*	1.0	1.6	65.9	29.7	26.2	14.1	6.8	2.5
Modal Age									
19–20	*800*	1.0	1.4	47.9	27.1	23.6	14.8	12.8	3.1
21–22	*800*	1.5	2.2	70.1	40.7	35.0	17.0	8.6	5.4
23–24	*800*	1.0	2.0	73.1	36.4	30.9	18.1	8.8	5.1
25–26	*800*	0.5	1.5	70.0	35.2	20.5	18.0	9.8	7.1
27–28	*800*	0.3	1.3	74.2	31.6	13.7	15.2	5.9	9.2
29–30	*700*	0.6	2.0	74.7	32.7	16.0	15.5	5.8	2.7
Region									
Northeast	*900*	0.7	1.2	72.6	38.2	27.1	16.4	6.9	3.3
Midwest	*1,300*	1.0	1.6	73.1	39.3	28.9	18.2	8.6	7.3
South	*1,500*	0.7	2.0	63.9	30.0	17.9	17.9	9.9	4.4
West	*1,000*	0.8	1.8	63.4	28.5	20.0	11.8	7.4	6.3
Population Density [e]									
Farm/Country	*400*	0.7	1.6	59.3	27.2	18.4	22.9	10.2	4.1
Small Town	*1,200*	0.9	1.6	63.4	29.1	22.7	18.1	8.2	5.7
Medium City	*1,200*	0.7	1.3	66.0	34.0	33.3	15.0	9.6	7.0
Large City	*1,100*	1.0	2.1	73.5	35.3	23.9	15.6	5.1	3.6
Very Large City	*700*	0.6	2.2	77.2	43.9	10.7	12.7	11.3	6.0

(Table continued on next page.)

TABLE 4-4 (cont.)
Thirty-Day Prevalence of Use of Various Types of Drugs by Subgroups among Respondents of Modal Ages 19–30, 2015

(Entries are percentages.)

	Approximate Weighted N	Flavored Little Cigars [c]	Regular Little Cigars [c]	Smokeless Tobacco [c]	Steroids [g]
Total	*4,700*	5.9	3.7	5.2	0.1
Gender					
Male	*1,900*	8.9	6.3	10.9	0.2
Female	*2,900*	4.0	1.9	1.7	*
Modal Age					
19–20	*800*	7.1	3.7	9.0	*
21–22	*800*	10.6	5.3	0.3	0.4
23–24	*800*	7.9	2.9	2.3	*
25–26	*800*	4.2	2.0	6.4	*
27–28	*800*	4.6	5.0	7.0	*
29–30	*700*	1.3	3.1	6.1	*
Region					
Northeast	*900*	7.4	3.4	2.1	*
Midwest	*1,300*	7.2	3.8	6.3	*
South	*1,500*	3.8	2.3	7.2	*
West	*1,000*	5.8	5.3	3.7	0.3
Population Density [e]					
Farm/Country	*400*	9.6	*	12.5	*
Small Town	*1,200*	4.1	3.0	3.2	*
Medium City	*1,200*	7.3	6.1	5.1	0.2
Large City	*1,100*	6.5	2.7	6.5	*
Very Large City	*700*	2.8	3.5	2.8	*

Source. The Monitoring the Future study, the University of Michigan.

Notes. ' * ' indicates a prevalence rate of less than 0.05%.

[a]Use of any illicit drug includes any use of marijuana, hallucinogens, cocaine, heroin or other narcotics, amphetamines, sedatives (barbiturates), or tranquilizers not under a doctor's orders.

[b]This drug was asked about in three of the six questionnaire forms. Total *N* is approximately 2,500.

[c]This drug was asked about in one of the six questionnaire forms. Total *N* is approximately 800.

[d]This drug was asked about in five of the six questionnaire forms. Total *N* is approximately 4,200.

[e]A small town is defined as having fewer than 50,000 inhabitants; a medium city as 50,000–100,000; a large city as 100,000–500,000; and a very large city as having over 500,000. Within each level of population density, suburban and urban respondents are combined.

[f]This drug was asked about in four of the six questionnaire forms. Total *N* is approximately 3,400.

[g]This drug was asked about in two of the six questionnaire forms. Total *N* is approximately 1,700.

[h]Only drug use that was not under a doctor's orders is included here.

[i]Based on data from the revised question, which attempts to exclude the inappropriate reporting of nonprescription amphetamines.

TABLE 4-5
Thirty-Day Prevalence of Daily Use [a] of Various Types of Drugs by Subgroups among Respondents of Modal Ages 19–30, 2015

(Entries are percentages.)

	Approximate Weighted N	Marijuana Daily	Alcohol Daily	Alcohol: 5+ Drinks in a Row in Last 2 Weeks	Cigarettes Daily	Cigarettes: 1/2 Pack+ per Day	Smokeless Tobacco[c]
Total	*4,700*	6.5	5.2	31.3	9.9	6.0	2.7
Gender							
Male	*1,900*	8.8	7.6	38.8	11.6	7.1	5.4
Female	*2,900*	4.9	3.7	26.3	8.8	5.3	1.1
Modal Age:							
19–20	*800*	7.9	1.6	23.7	6.8	3.6	3.7
21–22	*800*	6.3	3.9	34.8	10.0	5.1	0.3
23–24	*800*	7.0	5.2	35.0	11.0	7.0	1.0
25–26	*800*	7.0	5.6	34.8	11.4	6.6	4.1
27–28	*800*	5.5	7.5	31.6	9.1	6.2	2.5
29–30	*700*	4.7	7.8	27.7	11.3	7.7	4.5
Region							
Northeast	*900*	5.7	5.8	34.4	9.8	6.6	0.8
Midwest	*1,300*	6.5	5.9	37.4	11.6	7.5	3.7
South	*1,500*	6.1	4.2	27.2	11.7	6.8	4.0
West	*1,000*	7.9	5.3	25.9	5.5	2.4	1.5
Population Density [b]							
Farm/Country	*400*	3.9	5.6	29.3	15.8	10.3	6.6
Small Town	*1,200*	6.3	4.3	24.7	12.6	8.6	2.9
Medium City	*1,200*	5.8	4.2	31.3	8.2	4.6	3.7
Large City	*1,100*	7.6	6.0	33.7	8.9	4.7	2.2
Very Large City	*700*	7.0	6.9	39.0	5.9	2.6	0.0

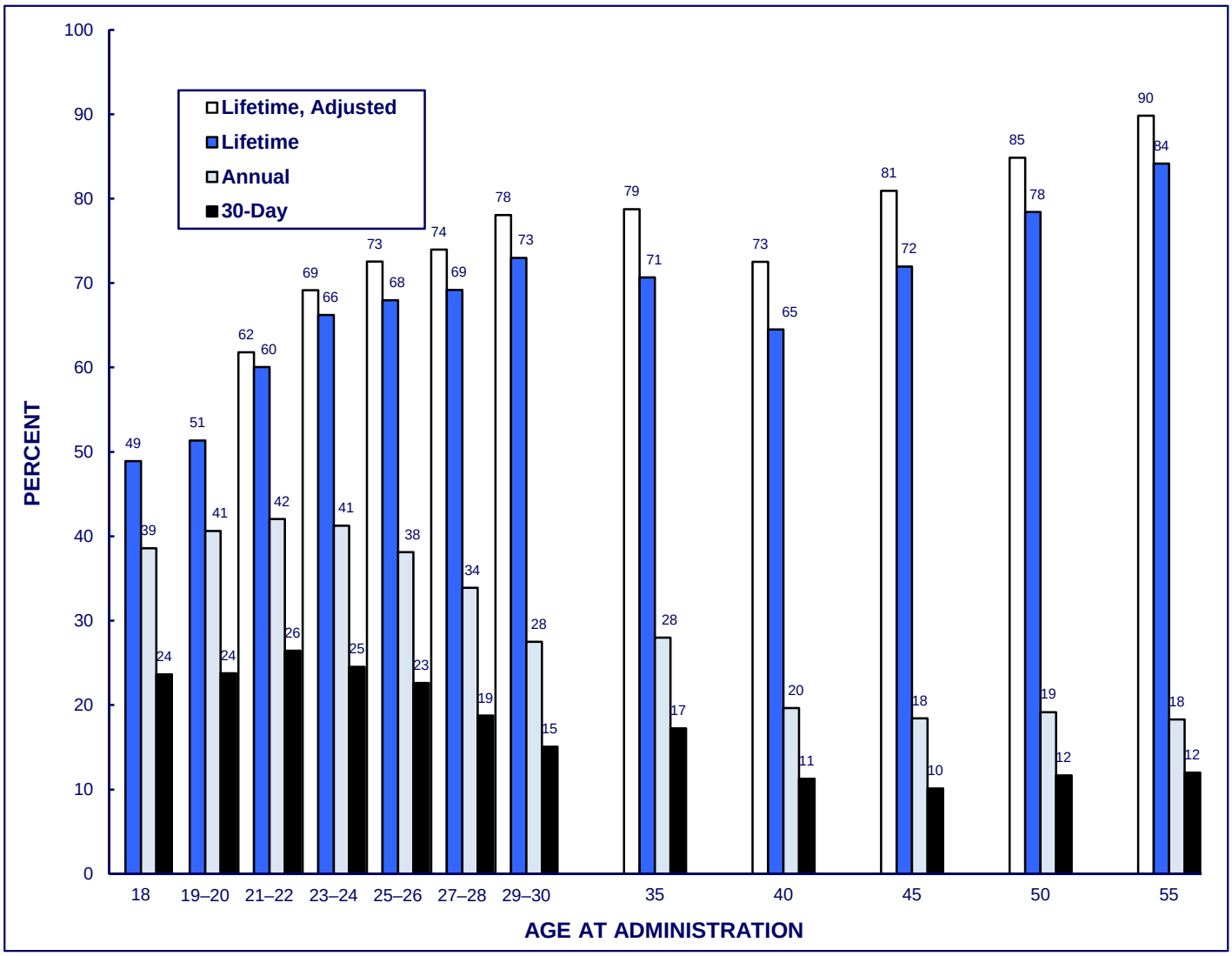
Source. The Monitoring the Future study, the University of Michigan.

[a]Daily use is defined as use on 20 or more occasions in the past 30 days except for cigarettes, measured as actual daily use, and 5+ drinks, measured as having five or more drinks in a row in the last two weeks.

[b]A small town is defined as having fewer than 50,000 inhabitants; a medium city as 50,000–100,000; a large city as 100,000–500,000; and a very large city as having over 500,000. Within each level of population density, suburban and urban respondents are combined.

[c]This drug was asked about in one of the six questionnaire forms. Total *N* is approximately 800.

FIGURE 4-1
ANY ILLICIT DRUG[a]
Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 55 by Age Group, 2015

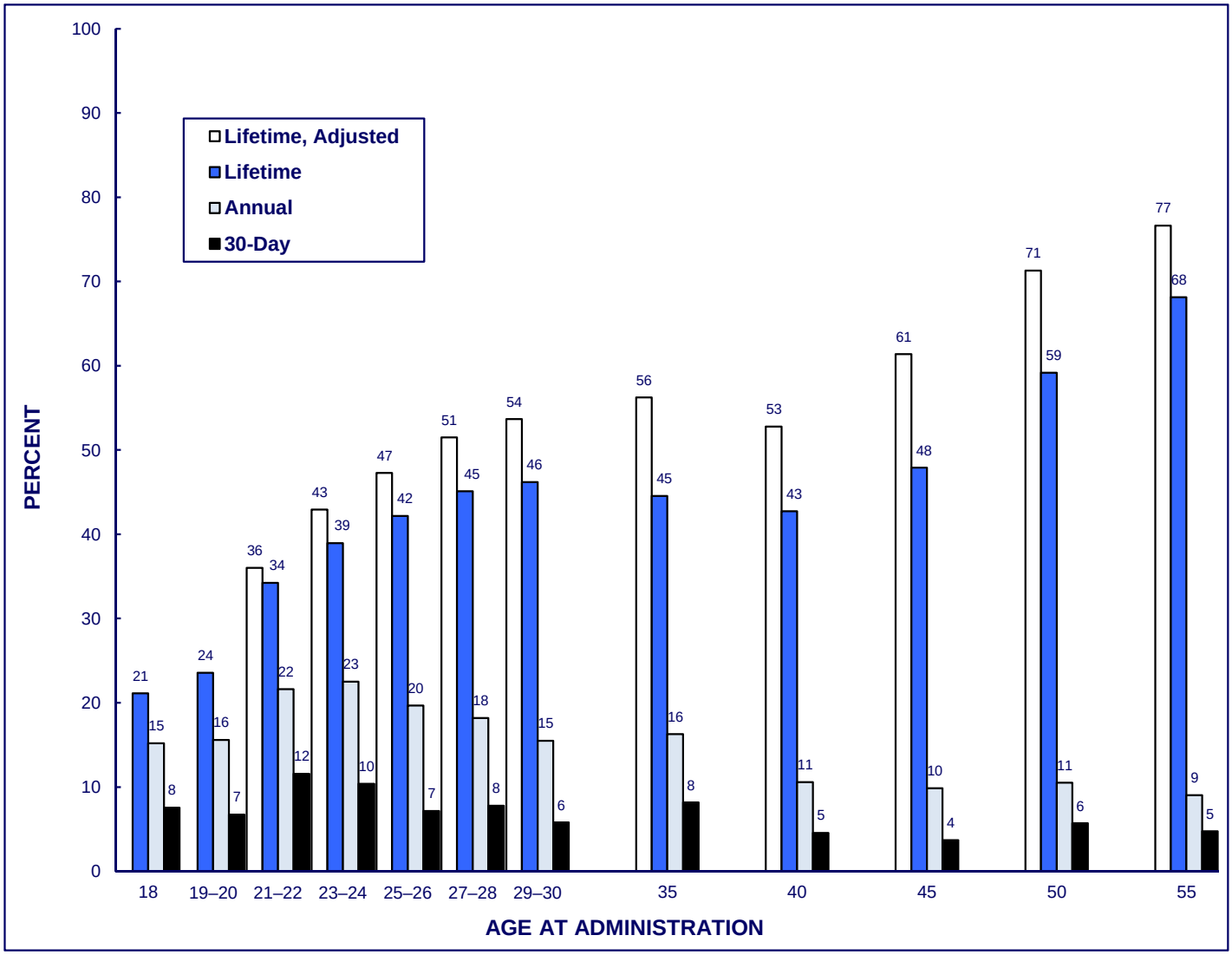


Source. The Monitoring the Future study, the University of Michigan.

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.
Due to rounding, some bars with the same number may have uneven height.

[a]The questions on hallucinogen use are not included in the age 55 questionnaire. Therefore, the data presented here include hallucinogens for ages 18 to 50, but not for age 55.

FIGURE 4-2
ANY ILLICIT DRUG OTHER THAN MARIJUANA[a]
Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 55 by Age Group, 2015

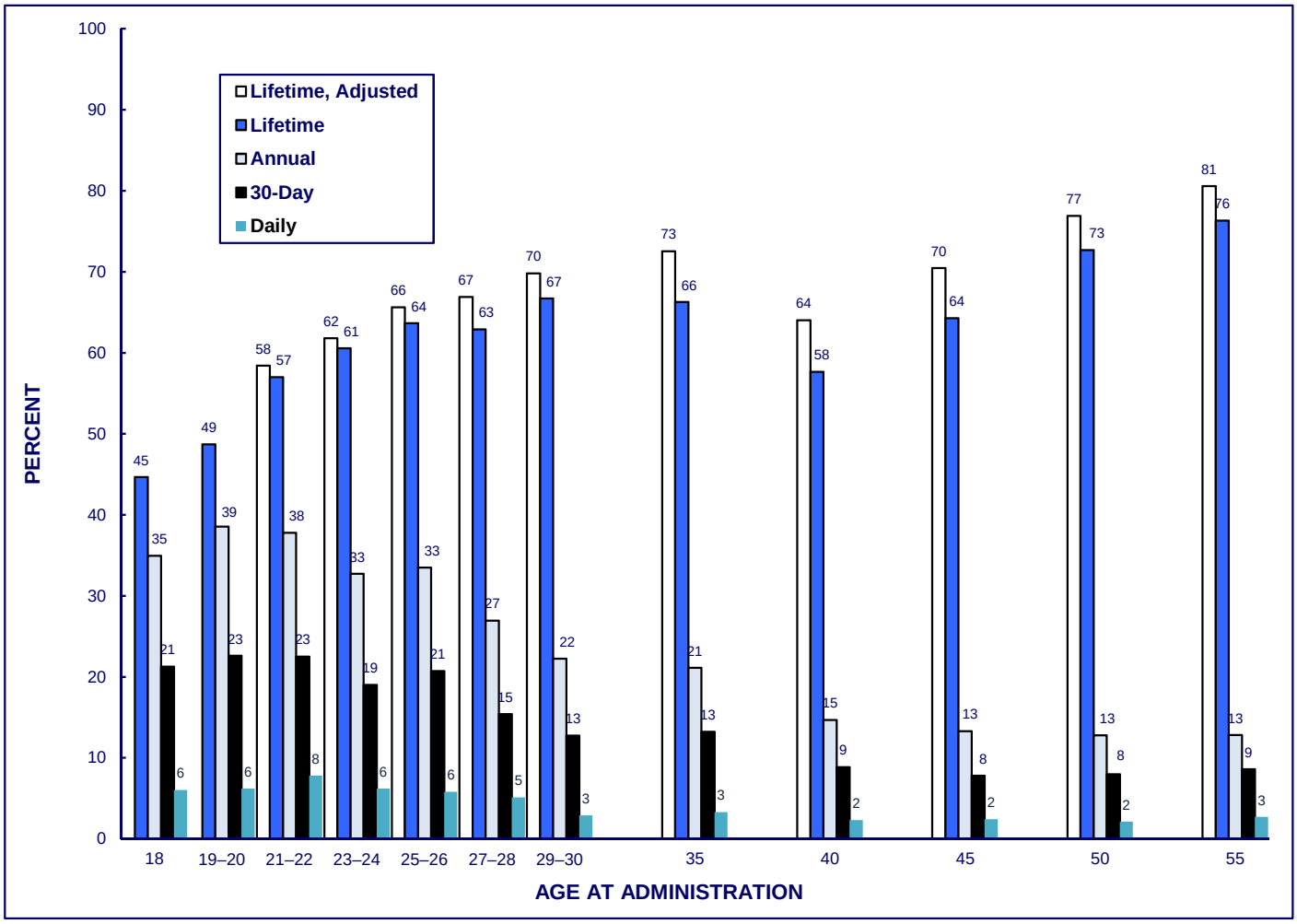


Source. The Monitoring the Future study, the University of Michigan.

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.
Due to rounding, some bars with the same number may have uneven height.

[a]The questions on hallucinogen use are not included in the age 55 questionnaire. Therefore, the data presented here include hallucinogens for ages 18 to 50, but not for age 55.

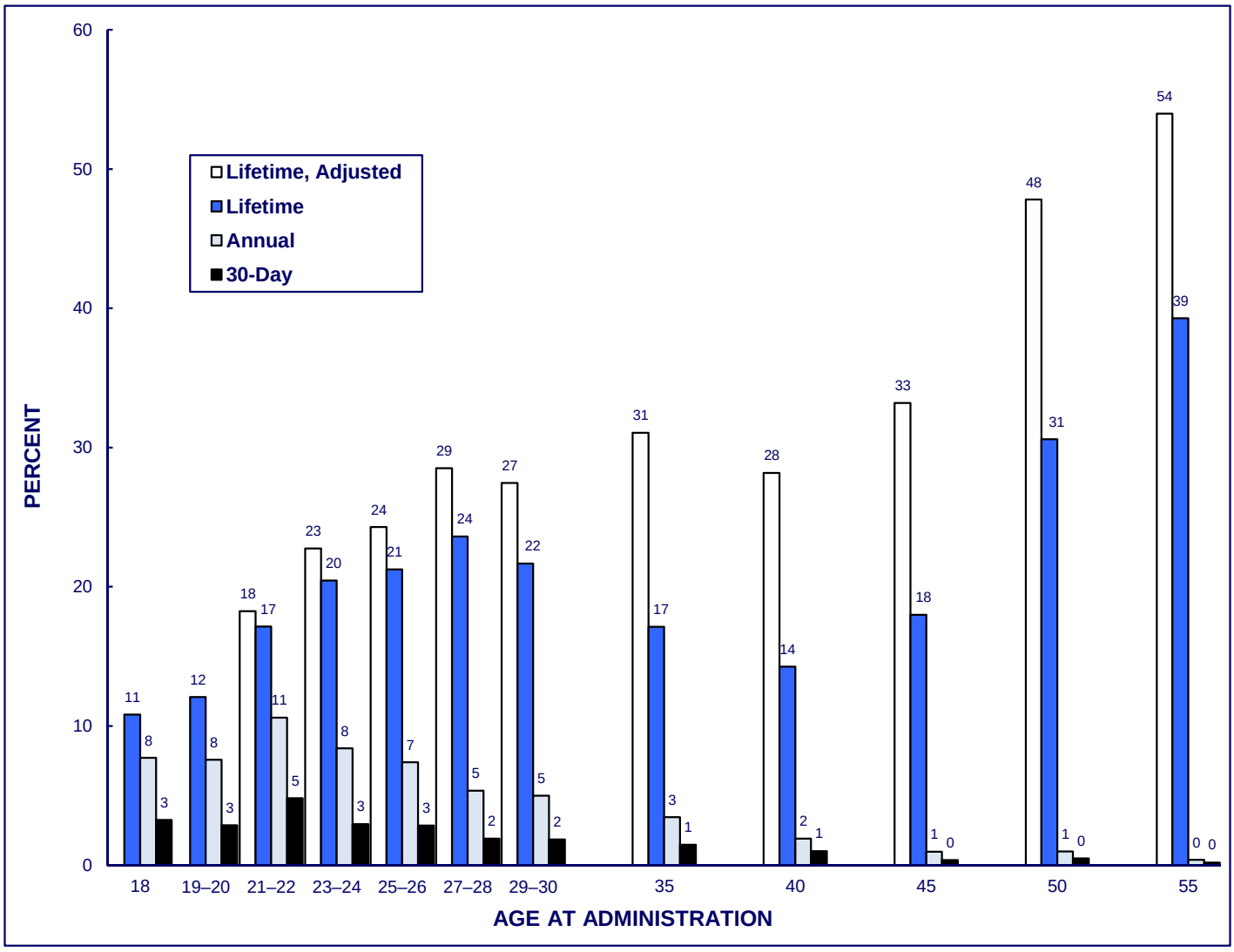
FIGURE 4-3
MARIJUANA
Lifetime, Annual, 30-Day, and Daily Prevalence among Respondents of Modal Ages 18 through 55 by Age Group, 2015



Source. The Monitoring the Future study, the University of Michigan.

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.
Due to rounding some bars with the same number may have uneven height.

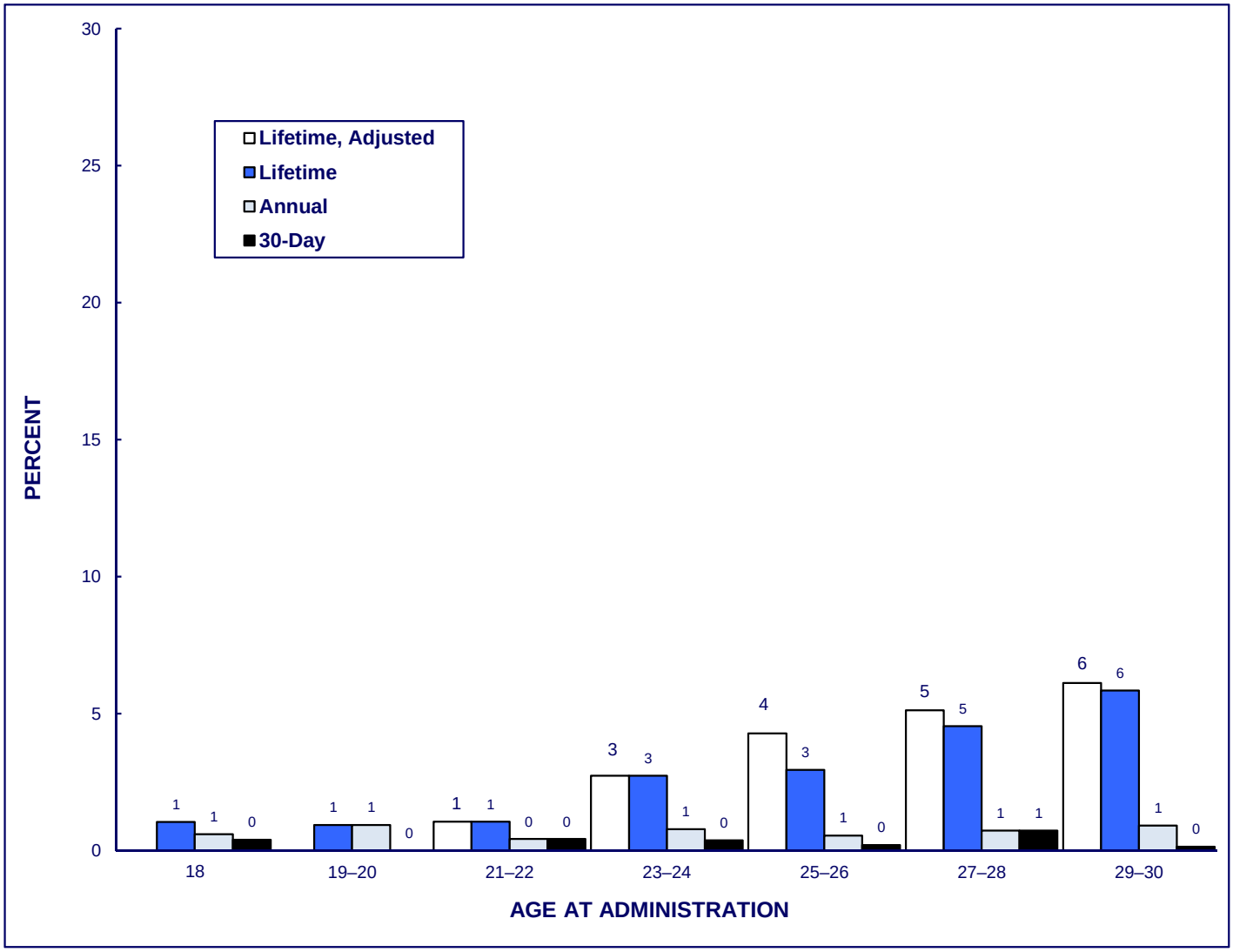
FIGURE 4-4
AMPHETAMINES
Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 55 by Age Group, 2015



Source. The Monitoring the Future study, the University of Michigan.

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.
Due to rounding, some bars with the same number may have uneven height.

FIGURE 4-5
METHAMPHETAMINE
Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 30 [a] by Age Group, 2015

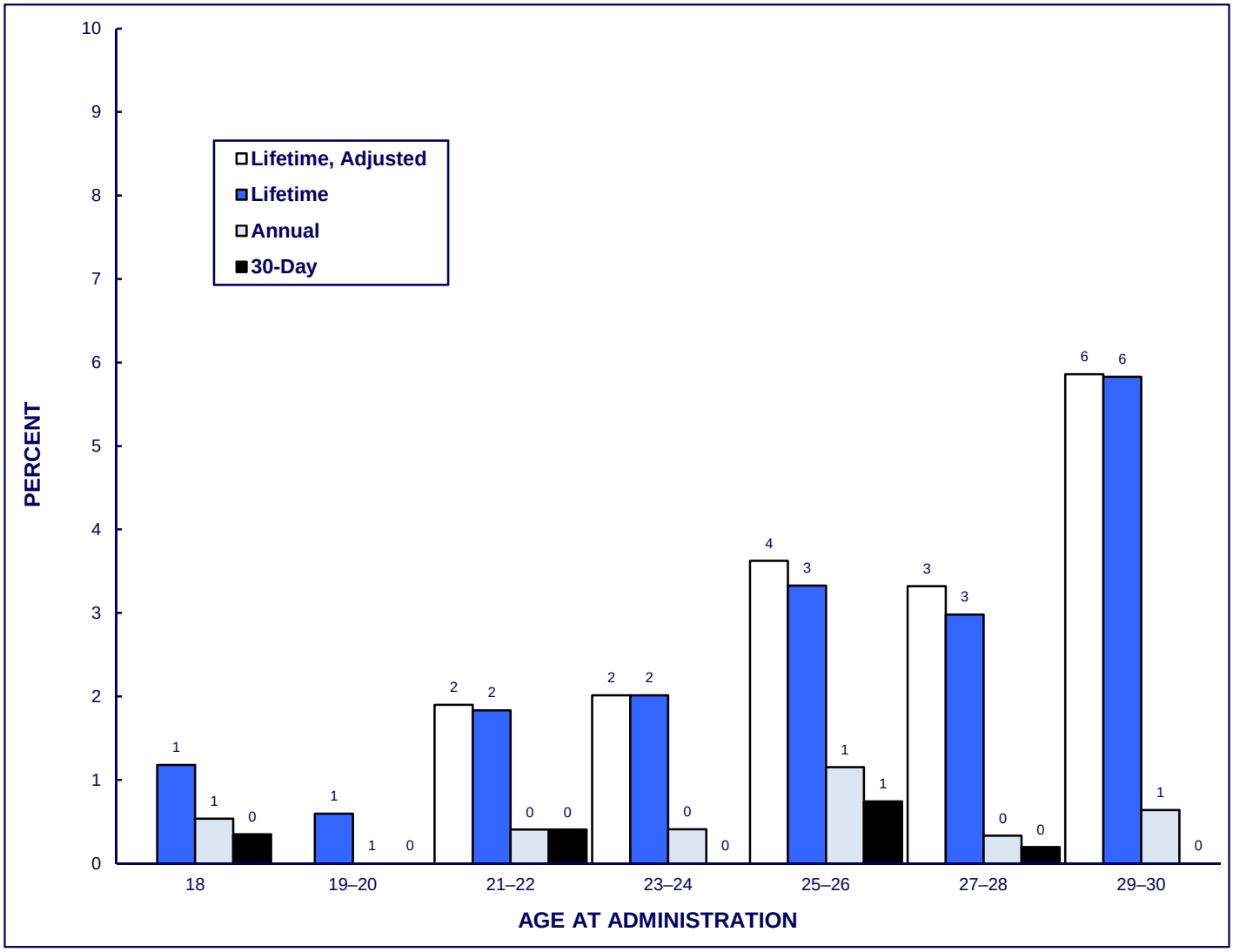


Source. The Monitoring the Future study, the University of Michigan.

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.
Due to rounding, some bars with the same number may have uneven height.

[a]Questions about the use of methamphetamines were not included in the questionnaires for 35-, 40-, 45-, and 50-year-olds.

FIGURE 4-6
CRYSTAL METHAMPHETAMINE (ICE)
Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 30 [a] by Age Group, 2015



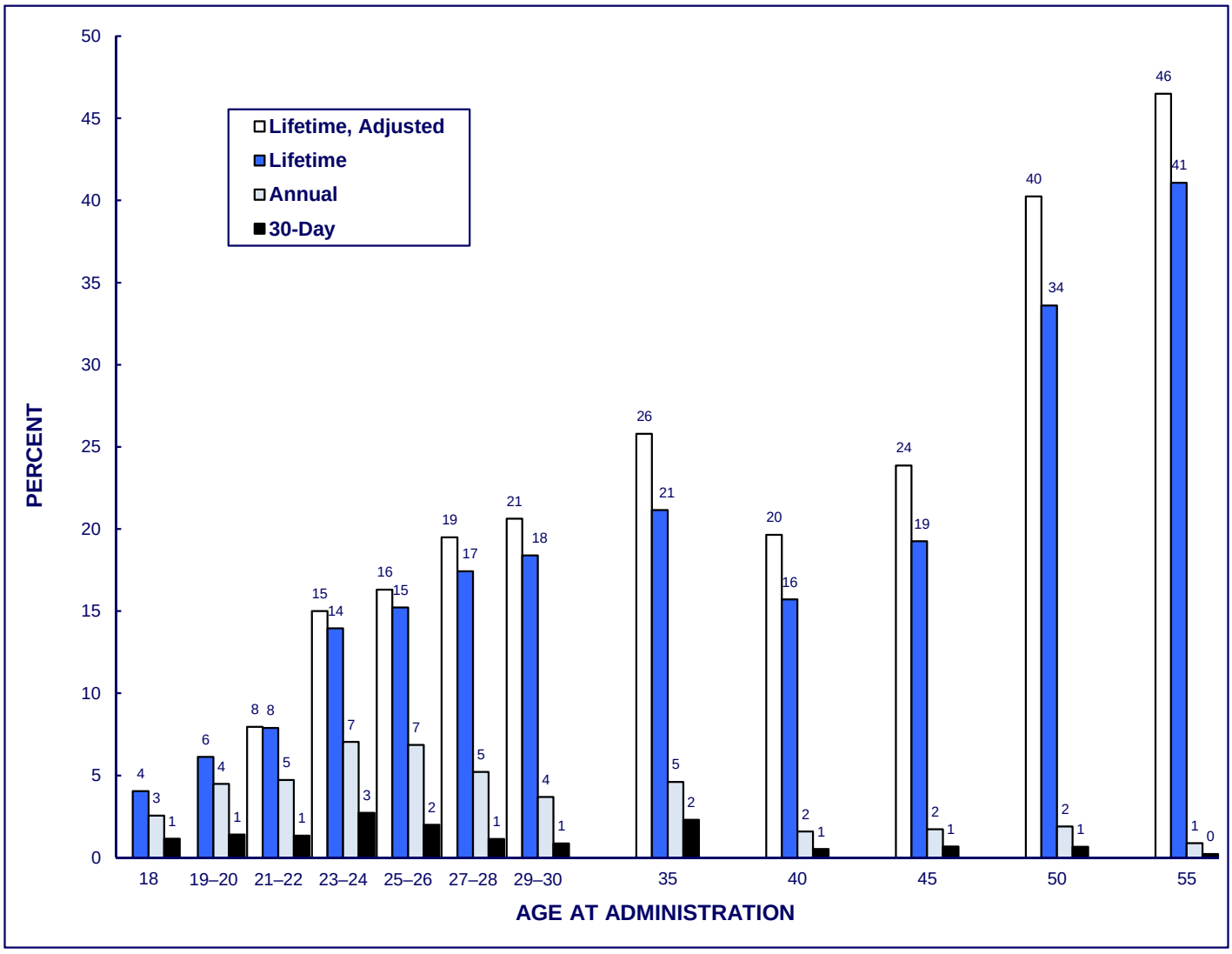
Source. The Monitoring the Future study, the University of Michigan.

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

Due to rounding, some bars with the same number may have uneven height.

[a]Questions about the use of crystal methamphetamine were not included in the questionnaires for 35-, 40-, 45-, and 50-year-olds.

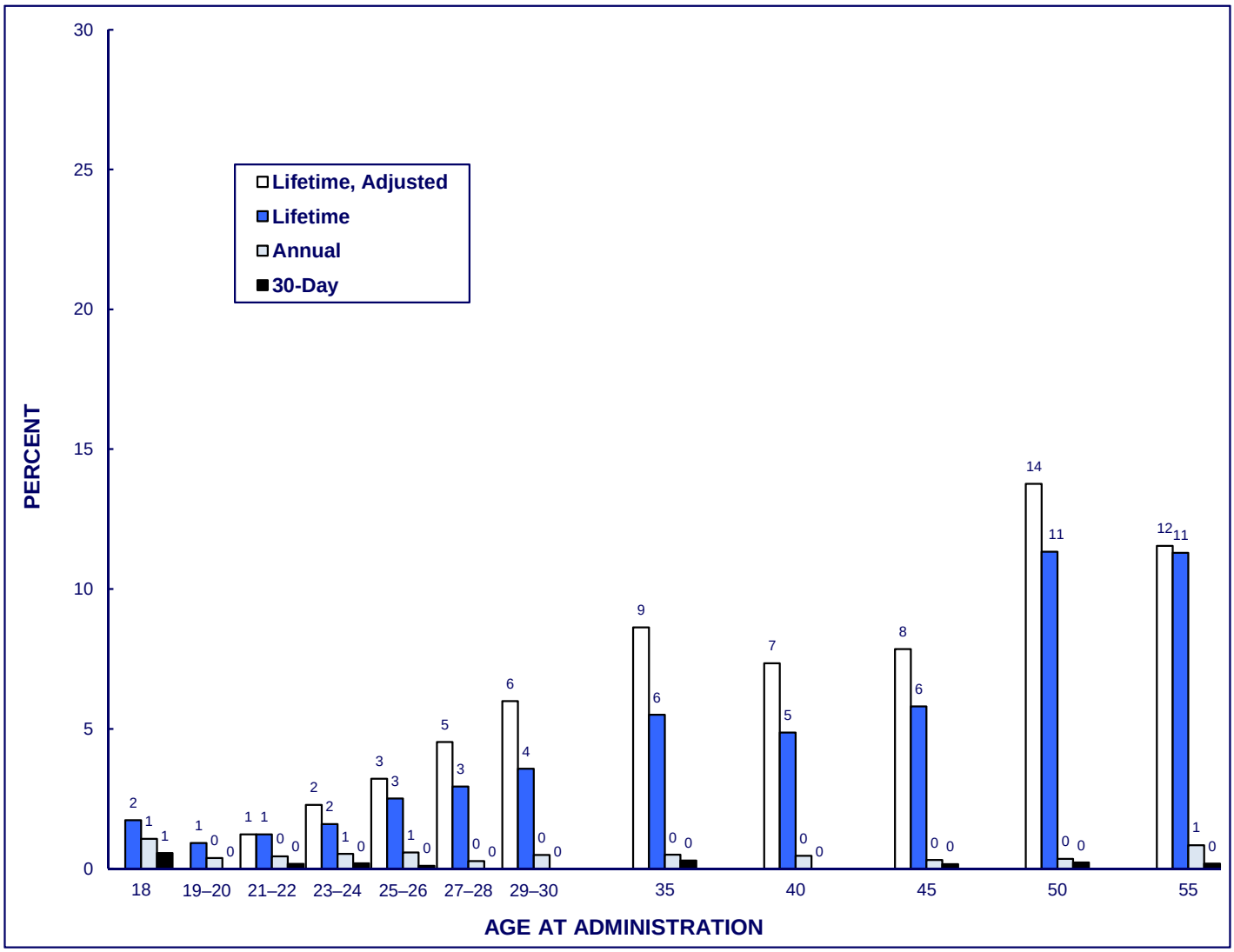
FIGURE 4-7
COCAINE
Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 55 by Age Group, 2015



Source. The Monitoring the Future study, the University of Michigan.

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.
Due to rounding some bars with the same number may have uneven height.

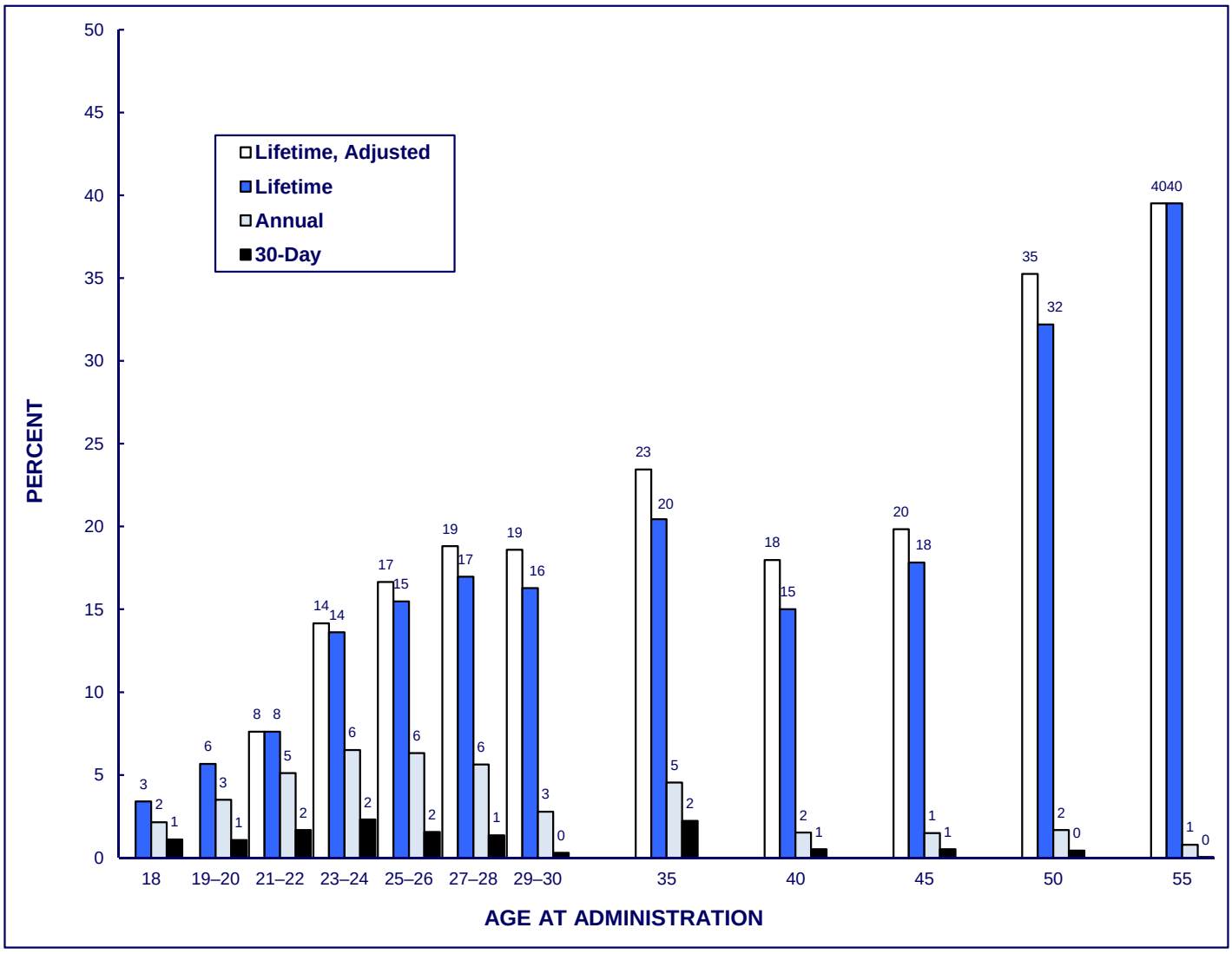
FIGURE 4-8
CRACK COCAINE
Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 55 by Age Group, 2015



Source. The Monitoring the Future study, the University of Michigan.

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.
Due to rounding, some bars with the same number may have uneven height.

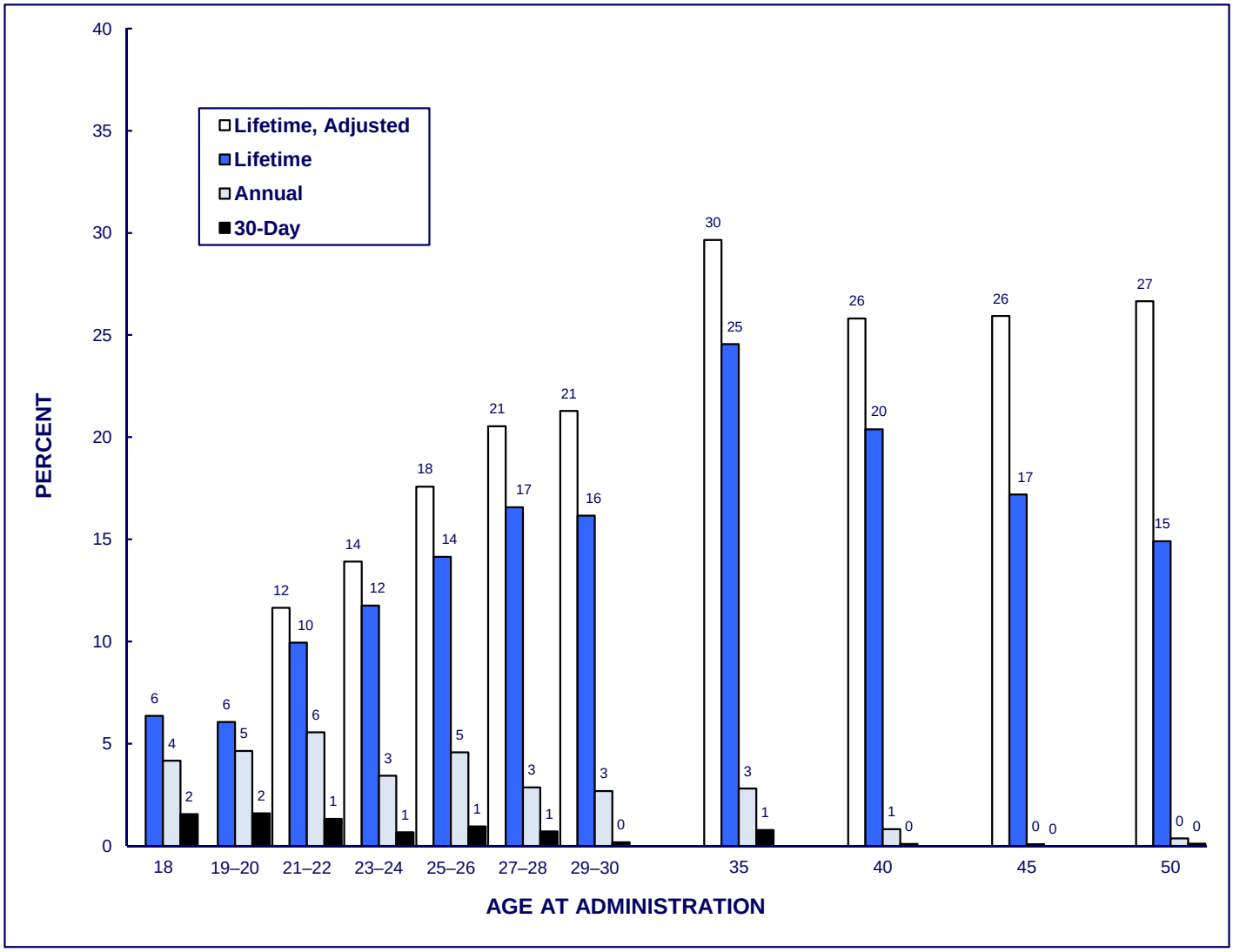
FIGURE 4-9
OTHER COCAINE
Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 55 by Age Group, 2015



Source. The Monitoring the Future study, the University of Michigan.

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.
Due to rounding, some bars with the same number may have uneven height.

FIGURE 4-10
HALLUCINOGENS [a]
Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 50[b] by Age Group, 2015



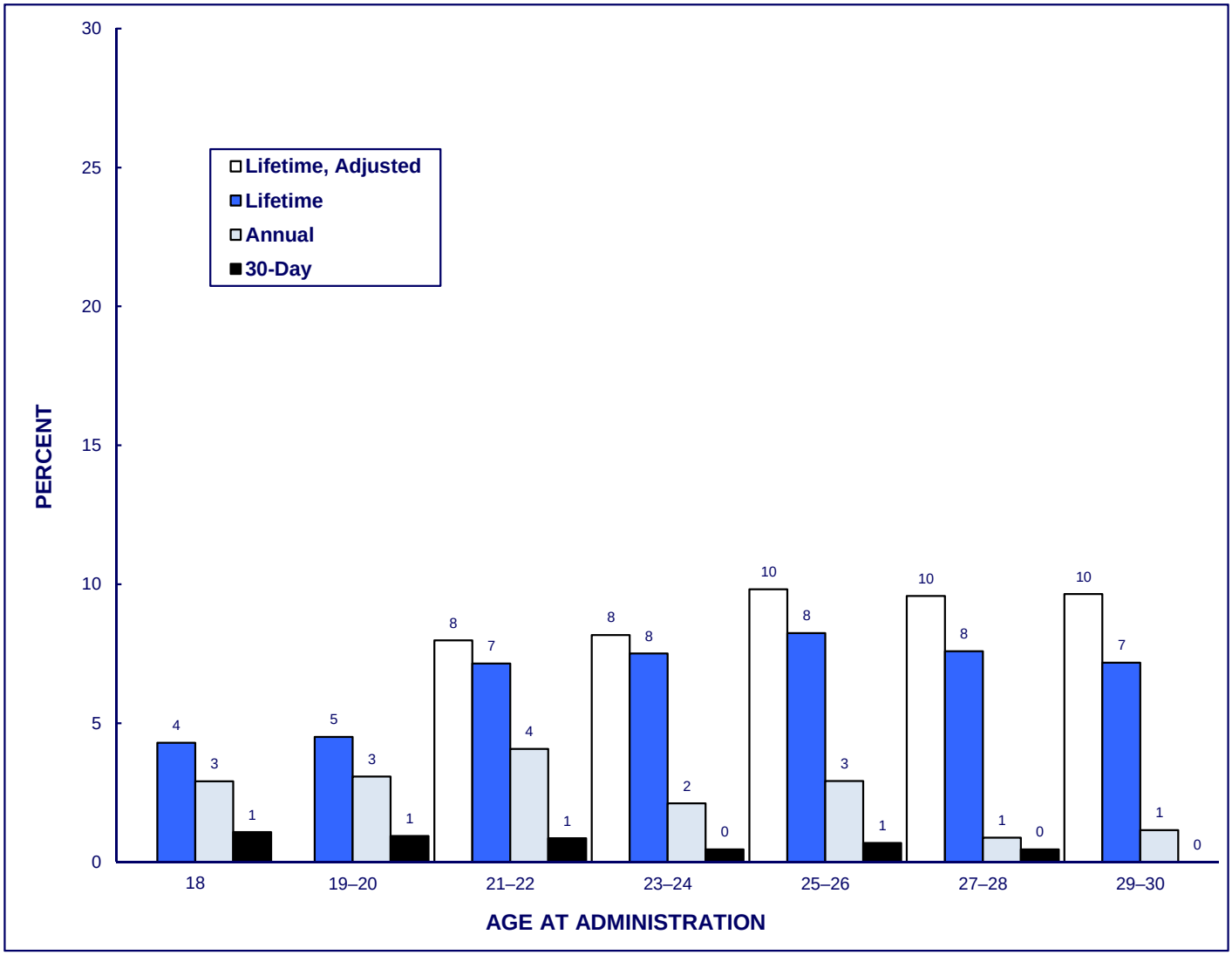
Source. The Monitoring the Future study, the University of Michigan.

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

Due to rounding, some bars with the same number may have uneven height.

[a]Unadjusted for the possible underreporting of PCP.
[b]Questions about the use of hallucinogens were not included in the questionnaires for 55-year-olds.

FIGURE 4-11
LSD
Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 30 [a] by Age Group, 2015



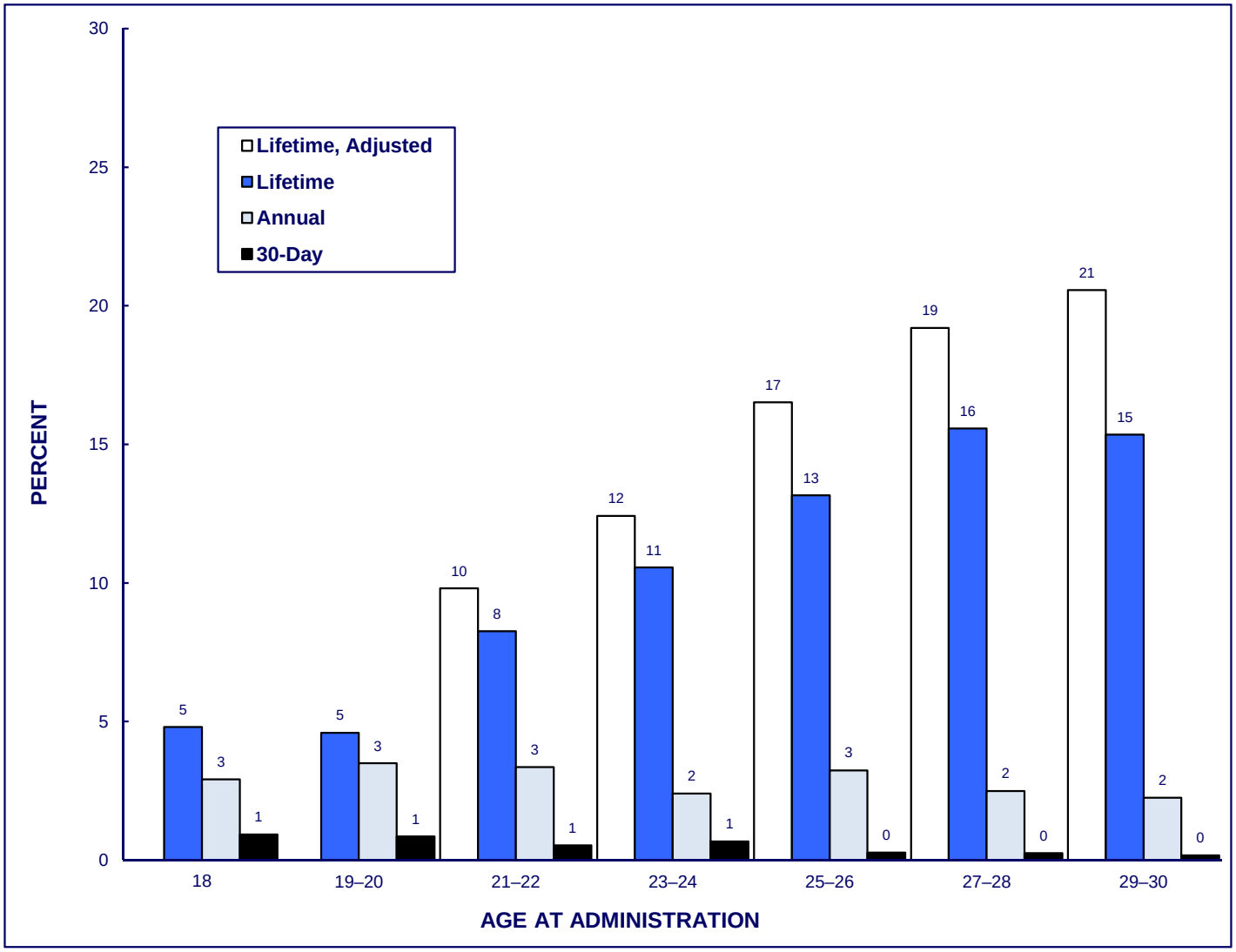
Source. The Monitoring the Future study, the University of Michigan.

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

Due to rounding, some bars with the same number may have uneven height.

[a]Questions about the use of LSD were not included in the questionnaires for 35-, 40-, 45-, and 50-year-olds.

FIGURE 4-12
HALLUCINOGENS OTHER THAN LSD [a]
Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 30 [b] by Age Group, 2015



Source. The Monitoring the Future study, the University of Michigan.

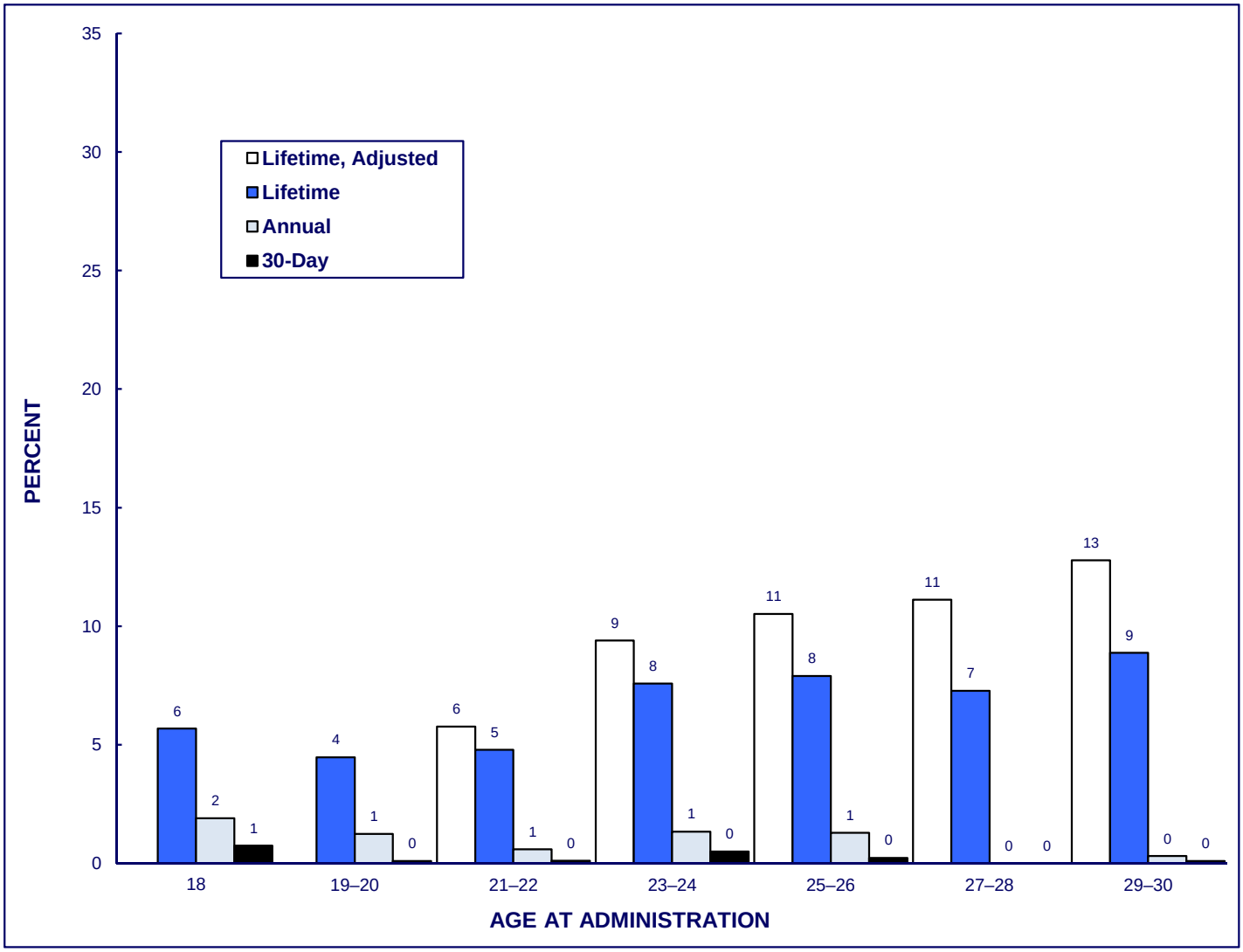
Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

Due to rounding, some bars with the same number may have uneven height.

[a]Unadjusted for the possible underreporting of PCP.

[b]Questions about the use of hallucinogens other than LSD were not included in the questionnaires for 35-, 40-, 45-, and 50-year-olds.

FIGURE 4-13
INHALANTS [a]
Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 30 [b] by Age Group, 2015



Source. The Monitoring the Future study, the University of Michigan.

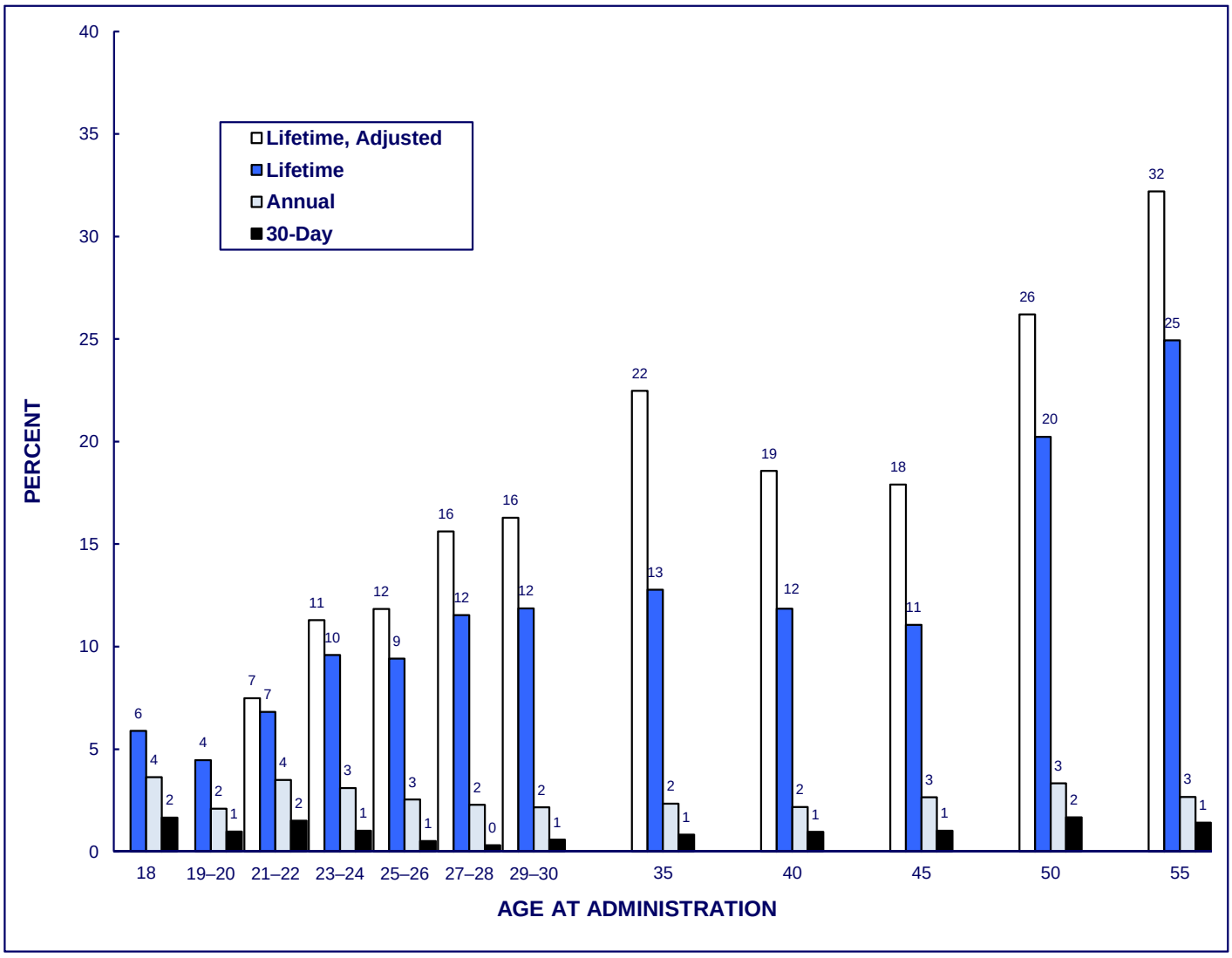
Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

Due to rounding some, bars with the same number may have uneven height.

[a]Unadjusted for the possible underreporting of amyl and butyl nitrites.

[b]Questions about the use of inhalants were not included in the questionnaires for 35-, 40-, 45-, and 50-year-olds.

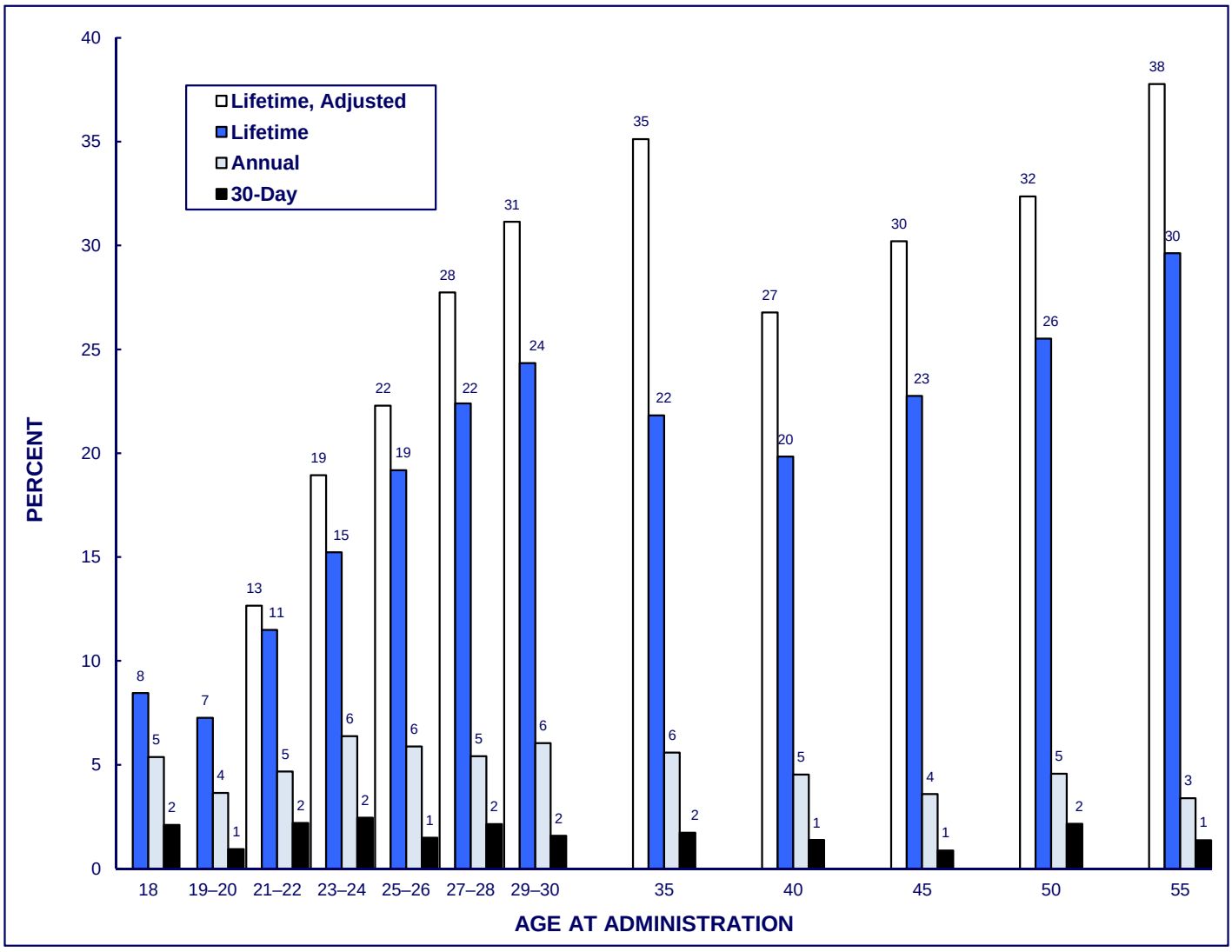
FIGURE 4-14
SEDATIVES (BARBITURATES)
Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 55 by Age Group, 2015



Source. The Monitoring the Future study, the University of Michigan.

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.
Due to rounding, some bars with the same number may have uneven height.

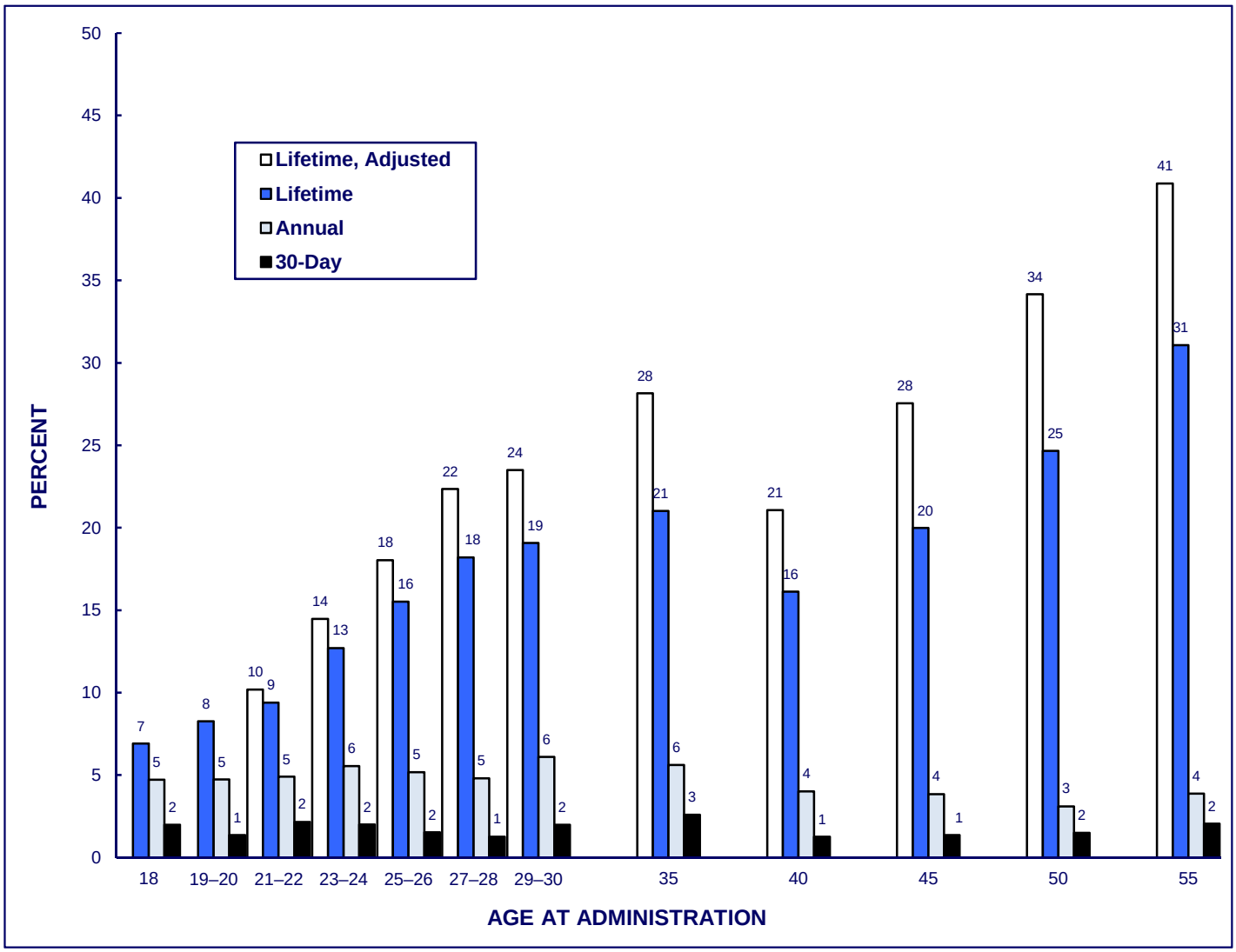
FIGURE 4-15
NARCOTICS OTHER THAN HEROIN
Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 55 by Age Group, 2015



Source. The Monitoring the Future study, the University of Michigan.

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.
Due to rounding, some bars with the same number may have uneven height.

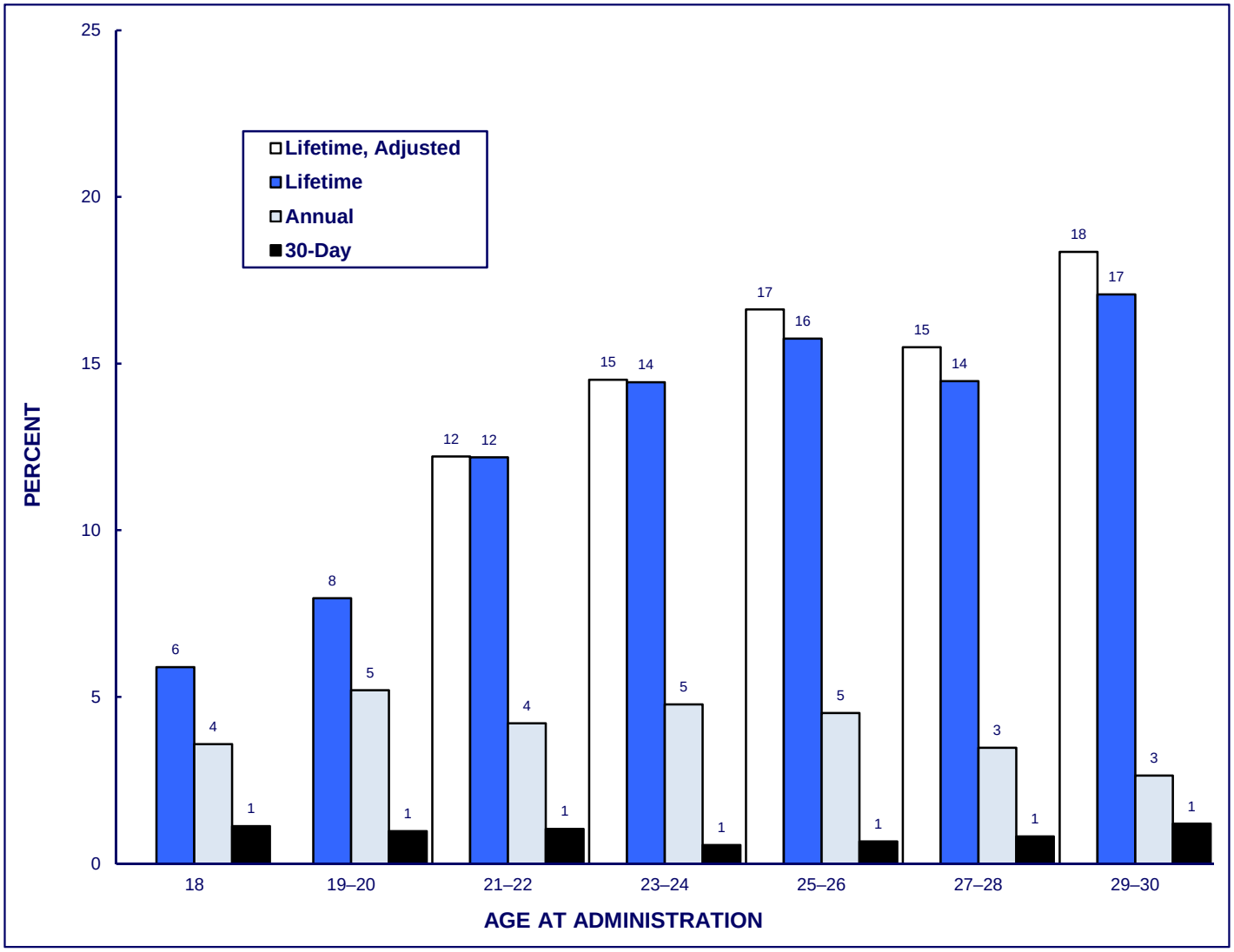
FIGURE 4-16
TRANQUILIZERS
Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 55 by Age Group, 2015



Source. The Monitoring the Future study, the University of Michigan.

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.
Due to rounding, some bars with the same number may have uneven height.

FIGURE 4-17
ECSTASY (MDMA)
Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 30 [a] by Age Group, 2015

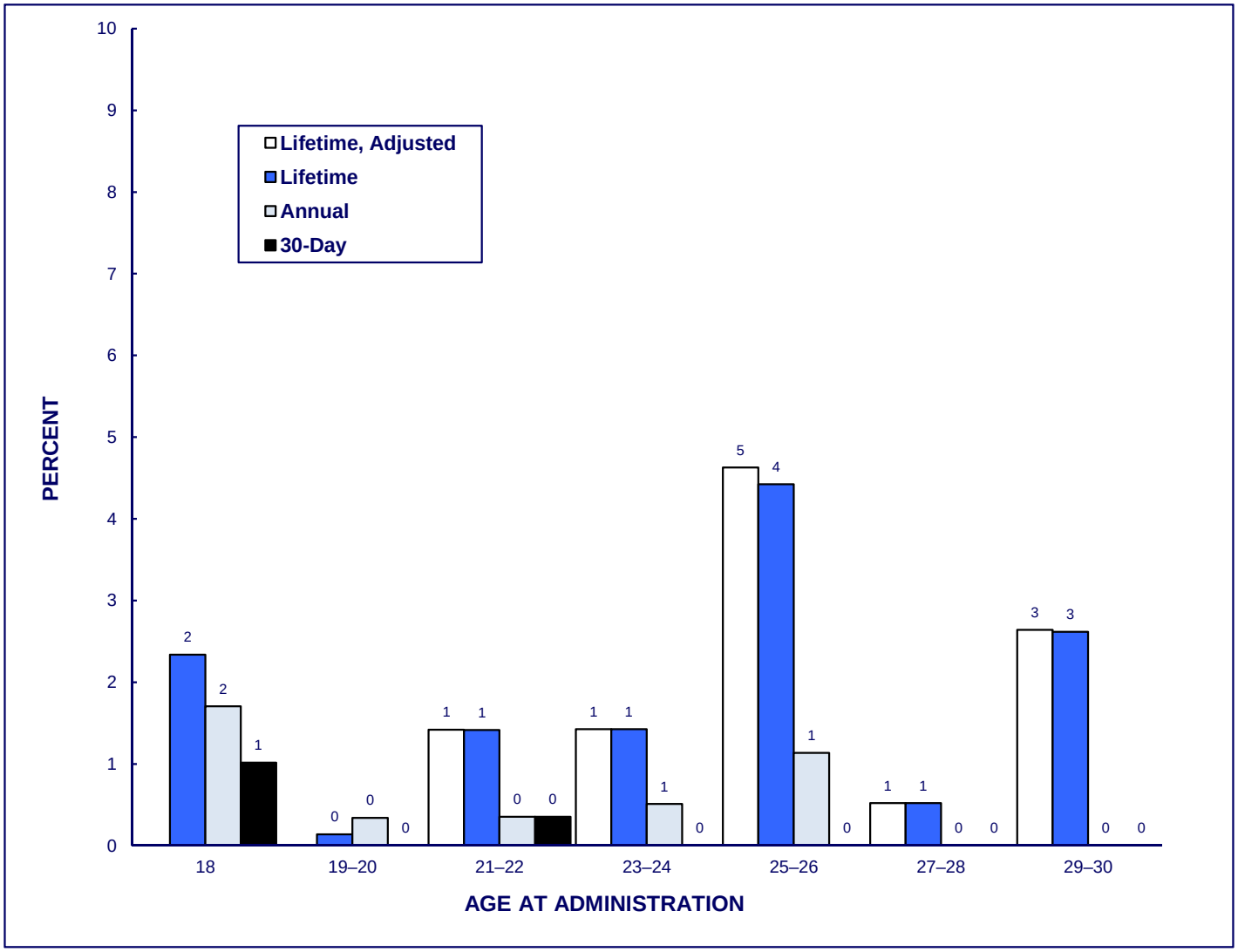


Source. The Monitoring the Future study, the University of Michigan.

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.
Due to rounding, some bars with the same number may have uneven height.

[a]Questions about the use of ecstasy were not included in the questionnaires for 35-, 40-, 45-, and 50-year-olds.

FIGURE 4-18
STEROIDS
Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 30 [a] by Age Group, 2015



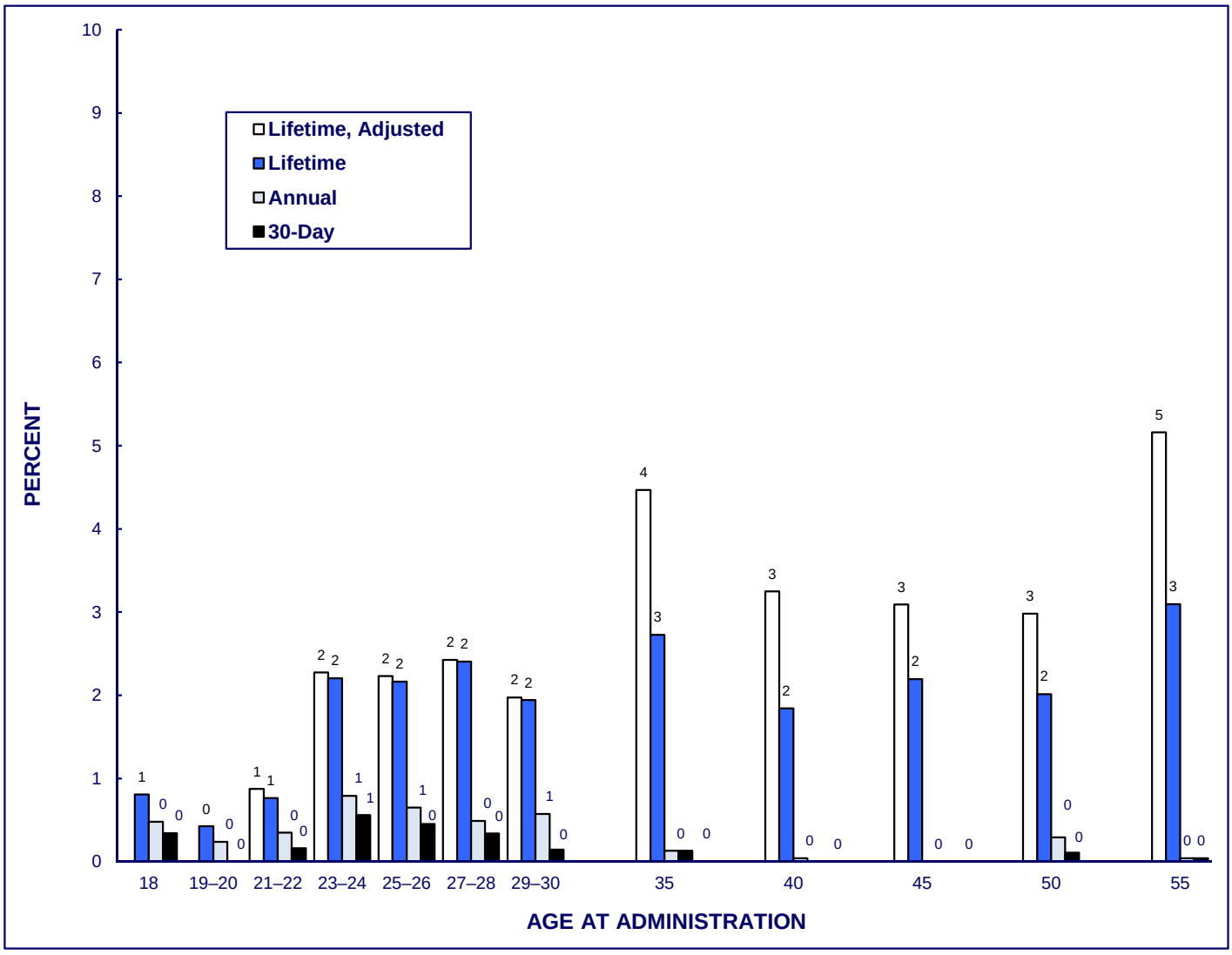
Source. The Monitoring the Future study, the University of Michigan.

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.

Due to rounding, some bars with the same number may have uneven height.

[a]Questions about the use of steroids were not included in the questionnaires for 35-, 40-, 45-, and 50-year-olds.

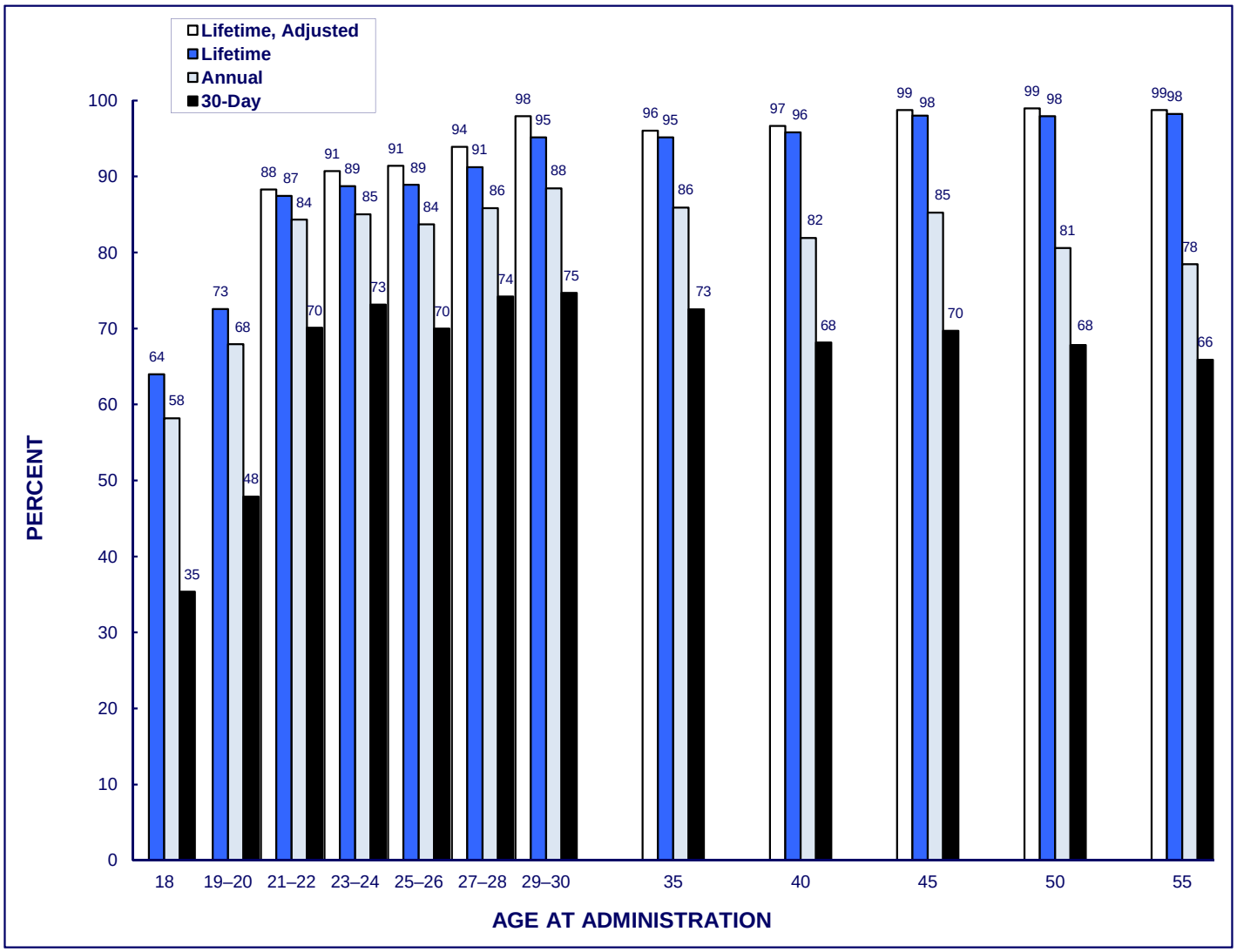
FIGURE 4-19
HEROIN
Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 55 by Age Group, 2015



Source. The Monitoring the Future study, the University of Michigan.

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.
Due to rounding, some bars with the same number may have uneven height.

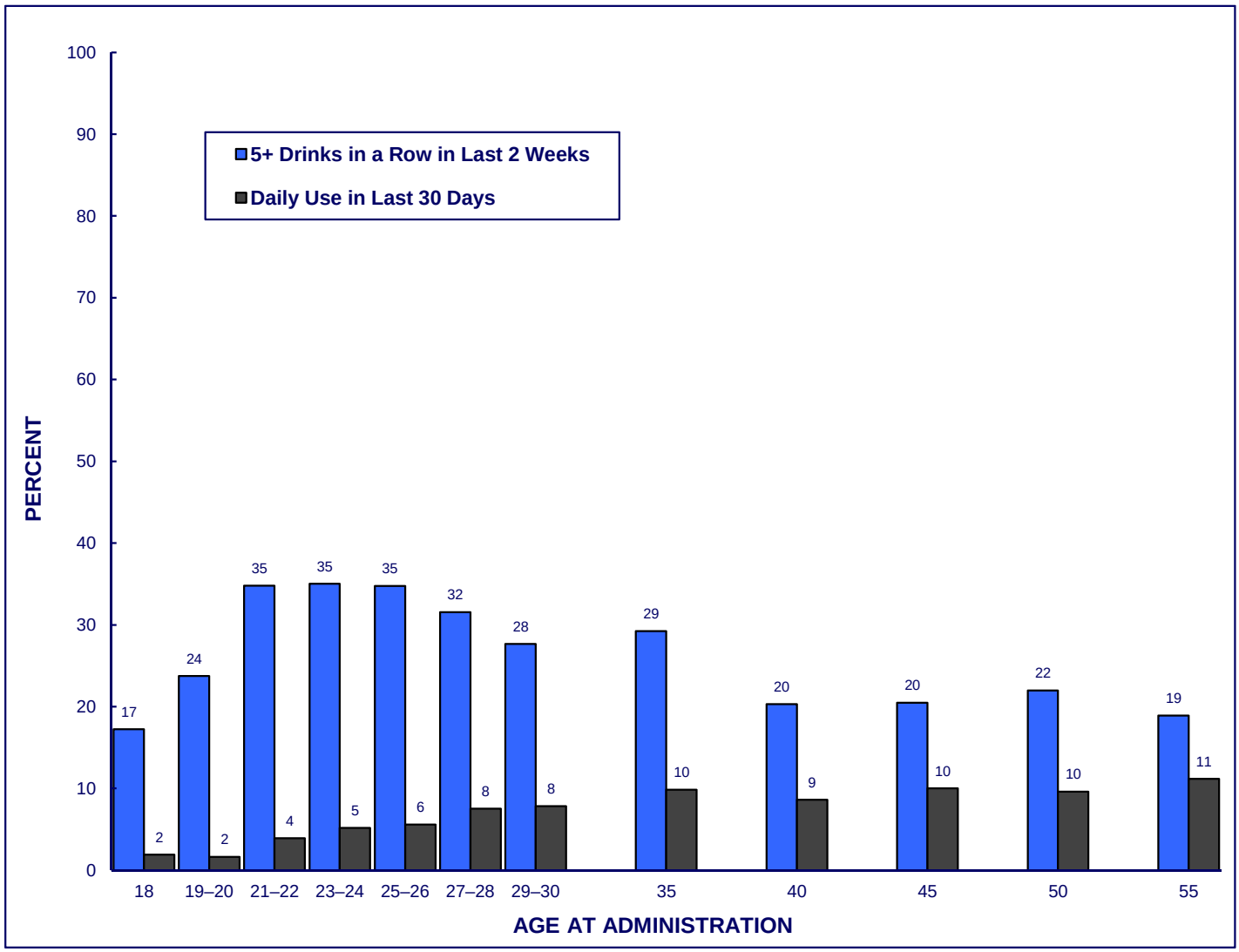
FIGURE 4-20a
ALCOHOL
Lifetime, Annual, and 30-Day Prevalence among Respondents of Modal Ages 18 through 55 by Age Group, 2015



Source. The Monitoring the Future study, the University of Michigan.

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.
Due to rounding, some bars with the same number may have uneven height.

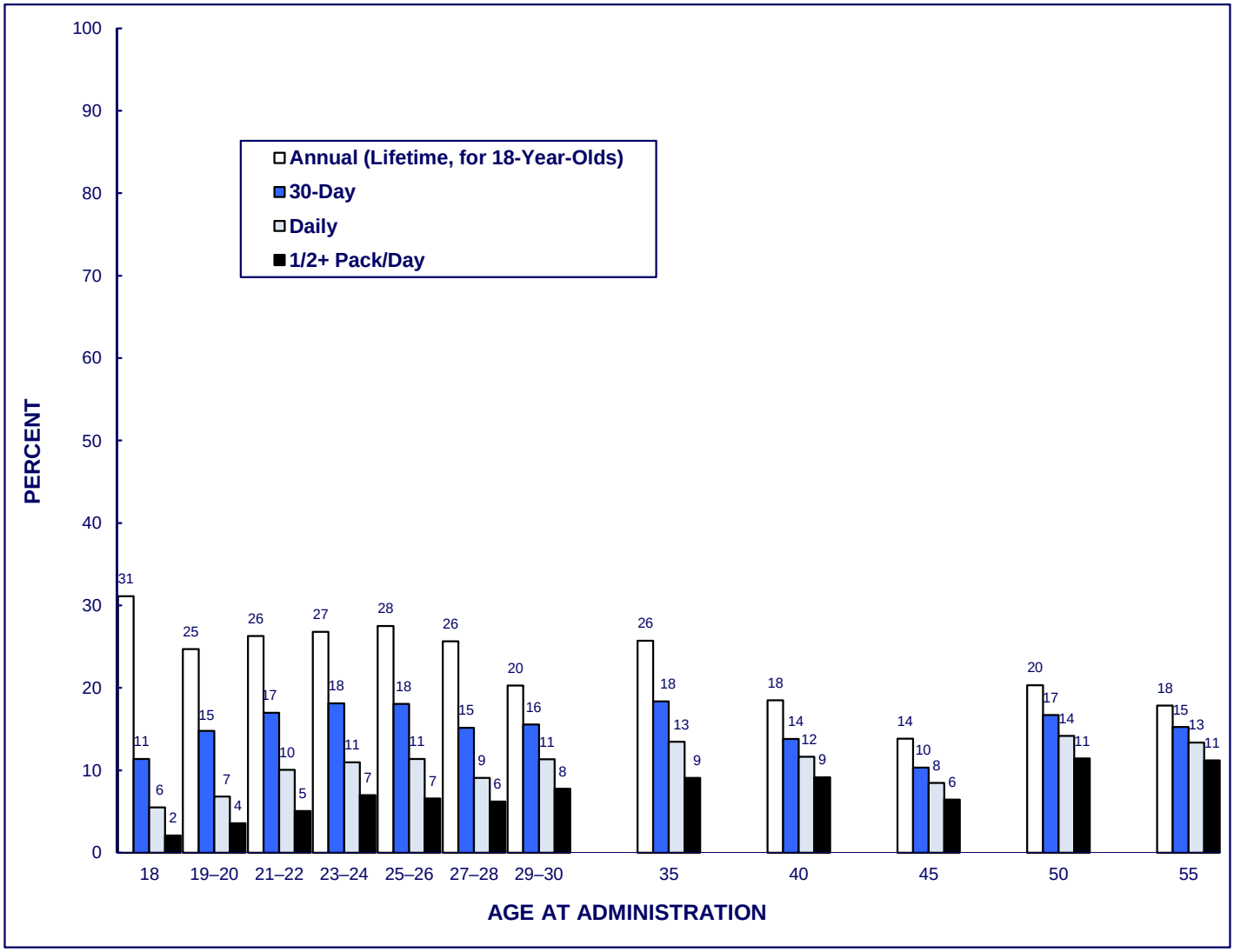
FIGURE 4-20b
ALCOHOL
2-Week Prevalence of 5 or More Drinks in a Row and 30-Day Prevalence of Daily Use among Respondents of Modal Ages 18 through 55 by Age Group, 2015



Source. The Monitoring the Future study, the University of Michigan.

Notes. Due to rounding some bars with the same number may have uneven height.

FIGURE 4-21
CIGARETTES
Annual, 30-Day, Daily, and Half-Pack-a-Day Prevalence among Respondents of Modal Ages 18 through 55 by Age Group, 2015



Source. The Monitoring the Future study, the University of Michigan.

Notes. Due to rounding, some bars with the same number may have uneven height.

Chapter 5

TRENDS IN DRUG USE IN EARLY AND MIDDLE ADULTHOOD

In this chapter, we examine historical trends through 2015 in substance use for various age bands covering early and middle adulthood, ages 19 through 55**.** We use MTF panel data from graduating high school seniors spanning four decades. Although panel data are typically used to study stability and change in the same individuals over time, we use the data here cross-sectionally to consider how substance use has varied across the years by age group, much as we use the repeated cross-sectional surveys of secondary school students to track changes in behaviors over time for particular grade levels (8, 10, and 12) in *Volume I*. In the early 1990s, we began to document large and important increases among secondary school students in the use of several substances, particularly marijuana and cigarettes. The increases continued among 12th graders through 1997, as discussed in *Volume I*. One of the important issues addressed in this chapter is whether such increases occurred only among adolescents or whether those higher-using graduating classes have carried their higher levels of drug use with them as they moved into young adulthood. In other words, are they exhibiting lasting differences across class cohorts, known as cohort effects These would be indicated by the inflection points in the cross-time trends (turning either up or down) coming sequentially across the age strata as cohorts age with a time lag between adjacent strata.

Figures 5-1 through 5-19c present separate trend lines for two-year age strata through age 32, that is, respondents who are one to two years beyond high school, three to four years beyond high school, and so on. These two-year age strata are used to reduce the random fluctuations that would be seen with one-year strata due to smaller sample size.[1] Each data point through age 32 in these figures is based on approximately 900 weighted cases drawn from two adjacent high school classes; actual (unweighted) numbers of cases are somewhat higher than those shown in the tables.[2] Figures 5-1 through 5-19c also present trend data from respondents at modal ages 35, 40, 45, 50, and 55 based on follow-up data collected at those ages. Beginning at age 35, the age strata are constituted in a slightly different way, in that the two half-samples from a *single* graduating class (which up through age 30 had been surveyed in alternating years) are now both surveyed in the same year.[3] Modal age 55 was first added to the survey in 2013, so no trend results were reported until 2014. The figures also include trend data for 18-year-olds for comparison purposes. The page following the figure for each drug contains a table of values for each point in the trend lines separately for the various age strata.

Tables 5-1 through 5-5 are derived from the same data but presented in tabular form for 19- to 28-year-olds *combined*. Data are given for each year in which they are available for that full age band

[1]Strictly speaking, these two-year strata are not age strata, because they are based on all respondents in the given year from two adjacent high school classes, and they do not take into account the minor differences in individual respondents' ages within each graduating class; however, they are close approximations to age strata, and we characterize them by the modal age of the respondents as ages 19 to 20, 21 to 22, and so on.

[2]For example, the 2015 data, the 19- to 20-year-old stratum is composed of participating respondents from the high school graduating classes of 2014 and 2013, respectively; the 21- to 22-year-old stratum contains data from the classes of 2012 and 2011, respectively; and so on.

[3]In 2015, the 35-year-olds are graduates from the high school class of 1998 (weighted N = 740), the 40-year-olds from the high school class of 1993 (weighted N = 792), the 45-year-olds from the high school class of 1988 (weighted N = 870), the 50-year-olds are graduates from the high school class of 1983 (weighted N = 817), and the 55-year-olds are graduates from the high school class of 1978 (weighted N=902). The unweighted actual Ns are somewhat higher.

(i.e., from 1986 onward). Respondents ages 29 and over are omitted from the tables because their inclusion would shorten the time period over which trends can be examined. However, the full data for those respondents are contained in Figures 5-1 through 5-19c.

RECENT TRENDS IN DRUG USE AMONG YOUNG ADULTS AGES 19-28

In 2015 the primary changes from the previous year in substance use among young adults ages 19 to 28 combined (shown in Tables 5-1 through 5-4) are as follows:

- The percent of young adults ages 19 to 28 indicating use of ***any illicit drug*** in the prior 12 months continued to increase—up by a nonsignificant 1.7 percentage points to reach 39.2% This is up from a recent low of 32.1% in 2006. Much of this increase has been due to the increases in marijuana use.

- ***Marijuana*** use showed a statistically significant 2.4 percentage point rise in annual prevalence to 34.0% in 2015. This was up from 27.7 % in 2006—the most recent low point. Levels today for this age group are at the highest they have been in more than 25 years.

- ***Daily marijuana*** use held steady at 6.8% in 2015 among young adults, but that is triple the rate in 1992 (2.3%), the low point since estimates for this age group first became available in 1986. The 2014 and 2015 rates are the highest levels of daily use ever observed in this young adult population since tracking of their use began 29 years ago.

- ***Synthetic marijuana*** use remained essentially unchanged in 2015 at 1.5%. This is down appreciably from the 7.4% prevalence observed in 2011, when use of this drug was first measured; this decline parallels a sharp decline in synthetic marijuana use among secondary school students.

- Use of ***any illicit drug other than marijuana*** showed a non-significant decrease of 1.6 percentage points to 19.5% in 2015, following a significant increase in 2014 when it rose from 18.1% to 21.2%. With the exception of 2014, this annual prevalence has been relatively stable from 2003 to 2015, at between 17% and 19%. One contributor to the increase in 2014 was a significant increase in the use of ***cocaine powder*** from 3.7% in 2013 to 4.8% in 2014. ***Adderall*** continued a longer-term increase in 2014 and leveled in 2015, with 7.7% of young adults saying that they had used it in the previous 12 months without medical supervision. ***Ritalin*** use, on the other hand, has remained fairly stable since 2009, following a period of decline, and stood at 1.8% annual prevalence in 2015. The decline in this index in 2015 appears largely to be due to a significant decline in use of ***narcotics other than heroin***, especially ***Vicodin.***

- ***Vicodin*** use by young adults has declined significantly and steadily from 9.1% in 2008 to 3.8% in 2015. The more general class of which it is a part, ***narcotics other than heroin,*** also has been declining since a recent peak level of use was reached in 2008; it continued to decline in 2015 with a significant drop of 1.1%, reaching 5.2%. This is an important class of substances, accounting for many overdose deaths, so the fact that use is now in

decline among young adults is a very favorable development for the nation's health.[4] Most other ***illicit drugs*** showed only minor changes in 2015 with the exceptions of ***salvia***, ***MDMA***, and ***cocaine*** (Table 5-2).

- Annual prevalence for ***salvia*** declined significantly from 1.2% in 2014 to 0.6% in 2015—its lowest point since salvia use was first measured in 2009, when it was 3.5%. Clearly this drug has not made a large or lasting impression on young adults.

- ***MDMA*** (ecstasy, and more recently Molly) showed a non-significant decline in 2015 from 5.1% to 4.4%, despite the inclusion of Molly as an example in both years. From 2003 through 2014 there had been some increase in use, so this year's decline appears to reflect a reversal of that trend.

- The annual prevalence of ***cocaine*** among young adults had reached a low point at 3.9% in 2013, but has since shown a rise to 5.0% in 2014 and 5.7% in 2015. This two-year increase is statistically significant, and suggests that cocaine may be making a comeback.

- There were few significant changes in the various measures of ***alcohol*** use, and most measures showed some modest decrease in 2015. The important exception is ***binge drinking***—having five or more drinks on one or more occasions in the prior two weeks. The gradual decline in this measure since about 2008 (when 37.9% of young adults indicated such use) continued into 2015, with a non-significant decline of 1.6 percentage points, reaching 31.9%. This decline among young adults follows a similar decline among high school seniors. The percent saying they had been drunk in the prior 30 days showed a larger and highly significant one-year drop, from 39% to 34%, but this measure had a bump up in 2014 which likely was due to random fluctuation.

- ***Cigarette smoking*** among young adults showed non-significant declines in 2015, a continuation of longer-term declines. *Thirty-day* prevalence declined by 0.9 percentage points to 16.6%, while *daily* smoking declined by 1.1 percentage points, reaching 9.7% in 2015. *Half-pack-a-day* smoking by young adults declined by a nonsignificant 0.9 percentage points to 5.7%. On all of these three measures of smoking, the 2015 levels are at historic lows, and they follow appreciable declines to historic lows among high school seniors (Figures 5-19a, b, and c).

LONGER-TERM TRENDS IN EARLY AND MIDDLE ADULTHOOD

The trend results are as follows:

- Longer-term declines among young adults in the annual prevalence of several drugs appeared to end in 1992 or 1993 (Table 5-2). Among the 19- to 28-year-old young adult sample, this was true for the use of ***any illicit drug***, ***marijuana***, ***any illicit drug other than marijuana***, ***hallucinogens***, ***narcotics other than heroin***, ***crack***, ***amphetamines***, ***sedatives*** (***barbiturates***), and ***tranquilizers***. In 1994, annual prevalence for most drugs remained

[4]National Institute on Drug Abuse, (2015). *Overdose death rates.* Accessed July 12, 2016, at https://www.drugabuse.gov/related-topics/trends-statistics/overdose-death-rates

steady. ***Cocaine other than crack*** reached its low point in 1994 after a period of substantial decline that began in the late 1980s. In 1995 there again were modest increases (a percentage point or less) in the annual prevalence of almost all of the drug classes in Table 5-2, some of which were statistically significant.

Thus, it was clear that by 1992 or 1993 the downward secular trend (i.e., period effect) running back to the 1980s and observable in all of these age strata (as well as among adolescents) had ended. What has happened since then, however, is more of a cohort effect, reflecting an interaction between age and period such that only adolescents showed an increase in illicit drug use initially, and they then carried those new (higher) levels of drug use with them as they entered older age bands. Figure 5-1 shows the effects of generational replacement on the use of any illicit drug, as the teens of the early 1990s reached their 20s. While all age groups generally moved in parallel through about 1992, the youngest age bands first showed signs of increase in their overall level of illicit drug use. The 18-year-olds shifted up first, followed by the 19- to 20-year-olds in 1994, the 21- to 22-year-olds in 1996, the 23- to 26-year-olds in 1999, the 29- to 30-year-olds in 2004, and the 35-year-olds in 2008. So far, the 40-, 45-, 50- and 55-year-olds have not shown much increase. (In fact, the 8th graders, who are not included in these graphs but are described in *Volume I*, actually began an increase in use a year earlier than the 12th graders, suggesting a cohort effect was already underway before use turned upward among 12th graders.)

Then, from 2007 to 2013, use among 12th graders and several of the youngest young adult age bands increased, and a number of the older age bands followed suit in subsequent years, once again suggesting a cohort effect (see Figure 5-1).

To summarize, in the earlier decline phase of the drug epidemic, annual prevalence of use of ***any illicit drug*** moved in parallel for all age strata, as illustrated in Figure 5-1; this pattern reflects a secular trend, because a similar change is observed simultaneously across different age levels. After 1992—in what we have called the "relapse phase" of the popular drug epidemic that began in the 1960s—a quite different pattern emerged: 8th graders increased their drug use first, followed by 10th and 12th graders; then the next-oldest age group increased use, but with a little delay; the next-oldest then increased use, but with a longer delay; and the oldest three groups (40-, 45- and 50-year-olds) are not yet showing much increase. This pattern reflects a classic cohort effect, in which different age groups are not all moving in parallel; rather, different age groups show increases when the cohorts (i.e., high school classes) having heavier use at an earlier stage in development reach the relevant age level. In addition, note that the slopes of the age bands are successively less steep in the older age groups, suggesting that some of the cohort effect may be dissipating with maturation, quite likely indicating an age effect. But we think it unlikely that only cohort effects are occurring (in addition to the long-established age effects); period effects also likely play a role.

- Use of ***marijuana*** shows an almost identical pattern to the illicit drug use index—not surprising given the fact that marijuana, by far the most prevalent of the illicit drugs, tends to drive the index (Figure 5-3a). After a long and steady decline from the late 1970s to the early 1990s, annual marijuana use leveled for a while among young adults before beginning

a gradual increase. Virtually all of this increase was attributable to the two youngest age bands (18 and 19 to 20) until 1996, when the 21- to 22-year-olds began to show a rise. The older age bands then tended to show increases fairly sequentially, with 29- to 30- and 35-year-olds showing significant increases in 2008. The 18-year-olds' use of marijuana in the prior 12 months declined after 1997 and, later, several of the succeeding age bands through age 26 began to show declines in a pattern that again suggests lasting cohort differences. Since about 2006, however, use has been rising not only among the 18-year-olds but also among all age bands, thus indicating a secular trend. This strongly suggests an impact on use by culture-wide events to which all of the age bands are exposed and by which they all were affected during this historical period. Changing attitudes toward marijuana use, perhaps driven in part by the legalization of medical use in many states and more recently by legalization of recreational use for adults in some states, likely have played an important role in this secular trend.

- A similar pattern emerged for current ***daily marijuana*** use (Figure 5-3c). In the mid- to late 1990s, daily marijuana use among 35- and 40-year-olds was as high as or higher than use among some younger age groups, suggesting a lasting cohort effect on this behavior, because the cohorts comprising those older age strata grew up in a period of particularly high adolescent marijuana use. However, in more recent years, the 35-, 40-, 45-, 50-, and 55-year-olds were similar to respondents ages 27 to 30, who had among the lowest levels of daily use in adolescence. An important finding shown in Figure 5-3c is that, although the various age groups had been moving in parallel for many years at fairly similar levels of prevalence, the trends diverged considerably in the 1990s in a staggered fashion, such that the 18- to 30-year-olds came to have distinctly higher levels of daily marijuana use (around 5% to 8% in 2015) than the older age groups (around 3% to 5%), again reflecting stable cohort differences. In 2010 the upturn in daily marijuana use that had been occurring at younger ages (best seen in the table accompanying Figure 5-3c) reached the age-35 stratum, with a significant increase from their 2009 prevalence rate. All age groups from age 19 through age 35 showed higher levels of daily use in 2015 than in 2010, reaching levels well above those observed in the early to mid-1990s (Figure 5-3c and associated table).

- The index of using ***any illicit drug other than marijuana*** has shown a similar transition in the pattern of change. Period effects seemed to predominate in the 1980s until about 1992, but a cohort-related pattern of change emerged thereafter (Figure 5-2). And, while the rise in annual use leveled by 1997 among 18-year-olds, it began rising in 1999 among 19- to 20-year-olds, in 2000 among 21- to 22-year-olds, in 2002 among 23- to 24-year-olds, in 2005 among 29- to 30-year-olds, and so on. The primary difference from the picture for marijuana is that the increases were not as sharp in the 1990s for most of the age groups. (Compare Figure 5-2 with Figure 5-1 to see the difference.) Since about 2008 the levels of use of any illicit drug other than marijuana in nearly all age groups have remained fairly steady with three exceptions: prevalence among 12th graders declined gradually and modestly from 2001 to 2009 before leveling and then declining further after 2013; use among 21- to 22-year-olds increased some in 2013 and held in 2014 and 2015 (use also rose some among 23- to 24-year-olds in 2014 and 2015); and 35-year-olds have shown a gradual long-term increase since 2001 that continued into 2015.

- A question about ***synthetic marijuana*** was added to the questionnaires for young adults in 2011 (Table 5-2). Annual prevalence was 7.4% that year among the 19- to 28-year-olds but dropped continually and significantly; it reached 1.5% in 2015, reflecting a decline of four fifths in just four years.

- With regard to ***inhalants***, the large separation of trend lines for the younger age groups in Figure 5-4 shows that, across many cohorts, use has dropped consistently and sharply with age, particularly in the first few years after high school. In fact, of all the populations covered by MTF, the 8th graders (not shown in Figure 5-4) have had the highest rate of use, indicating that the decline in use with age starts at least as early as 8th or 9th grade. Like cocaine, inhalants have shown a strong age effect, but unlike cocaine, use of inhalants declines rather than increases with age and the age effect has sustained throughout the life of the study.

 Figure 5-4 also shows that, until the mid-1990s, there was a long-term gradual increase in annual inhalant use (unadjusted for underreporting of nitrite inhalants), one which was greatest among 12th graders, next greatest among 19- to 20-year-olds, and next greatest among 21- to 22-year-olds. Respondents more than six years past high school, who historically have had a negligible rate of use, did not exhibit the increases in use seen among the younger respondents, which began at least as early as 1977 among 12th graders and in 1983 among 19- to 20-year-olds. There was some subsequent increase among 21- to 22-year-olds and, later still, an increase among 23- to 24-year-olds. After 1995, this long-term trend, reflecting a cohort effect, began to reverse in the two youngest age strata (coincident with an anti-inhalant media campaign by the Partnership for a Drug-Free America) as well as among several other age strata, suggesting a period effect due to some culture-wide influence, such as a media campaign. Subsequently, further declines among several age strata are suggestive of a cohort effect. The older age strata have generally shown very low rates of inhalant use throughout the course of the study.

- In the late 1980s and first half of the 1990s, ***LSD*** use also increased among those in their teens and early 20s much more than among the older strata, as Figure 5-6 illustrates. Over the interval 1985 to 1996, there was a gradual but considerable increase in annual LSD use among respondents ages 18 to 24, which was sharpest among 12th graders and 19- to 20-year-olds. The increase did not seem to radiate up the age spectrum beyond age 26. A turnaround began among 12th graders after 1995 and then among the older age groups in a somewhat staggered fashion, again indicative of a cohort effect. Declines in the years since then have been greatest among 18- to 24-year-olds, who had attained the highest rates of LSD use. Use declined considerably from 2001 to 2003 in all age bands (including 8th and 10th graders), and then leveled through 2007 at historically low rates, suggesting that an important secular trend may have set in, which was quite possibly related to decreased availability of the drug. Since 2007 there has been evidence of a very gradual increase in use, particularly among those ages 18 to 26.

- The use of ***hallucinogens other than LSD*** showed a similar and fairly parallel decline in use among all age bands through the 1980s, indicating a secular trend (Figure 5-7). During the relapse phase for many drugs during the 1990s, there was a substantial increase in use

among the younger age bands, but not among those ages 27 or older. The increases in the older age bands did not appear for some time, indicating a cohort effect at work. Since about 2003, the prevalence of use of hallucinogens other than LSD has gradually declined among those ages 24 or younger, while use reported by the older age bands has continued to climb gradually due to the cohort effect sustaining.

- The annual prevalence for ***MDMA*** use (ecstasy and more recently Molly) among those aged 19 to 28 was at about 1.5% in 1989 and 1990 (Table 5-2 and Figure 5-8). After 1991 it dropped to around 0.8% for several years before rising significantly in 1995. Ecstasy use then rose sharply in all of the young adult age strata, most notably in the younger age bands (19 through 26) through 2001. Use among 12th graders, which was not measured until 1996, was by then the highest of any of the age groups at 4.6% annual prevalence. Twelfth graders' use declined by a full percentage point through 1998 before jumping significantly—by two full percentage points—in 1999. (Use by 10th graders also jumped significantly in 1999.) Thus it appears that young people from their mid-teens to mid-20s "discovered" ecstasy after some years of low and relatively level use. In 2000 the sharp increase in use continued among ages 15 to 16 (10th graders) through age 26—with highs of over 10% among 19- to 22-year-olds—and also showed up among 8th graders for the first time. By 2001 the increase had slowed and even begun to reverse among those ages 18 to 26, even as the 31- to 32-year-olds showed their first appreciable increase in ecstasy use. We attributed the deceleration in 2001 to a fairly sharp increase in perceived risk of ecstasy use in that year, and based on that, we predicted a turnaround in use in 2002. In 2002, and again in 2003, perceived risk increased sharply and, as Figure 5-8 illustrates, all age bands showed a reversal with a sharp decrease in use. Clearly, the decrease has been sharpest in the younger age bands, perhaps because a cohort effect is at work in the upper ages, helping to offset a downward secular trend. Since about 2005 there has been some rebound in ecstasy use in all age bands through age 30 (older respondents are not asked about this drug), and the increase has been staggered, suggesting that another cohort effect is underway. In 2015 annual ecstasy (MDMA) prevalence stood at 3.6% to 5.2% for 19- to 28-year-olds and at 2.6% for those 29 to 30 (Table 4-3).

- Several drug classes exhibited a faster decline in use among the older age groups than among 12th graders during the earlier period of decline in the 1980s (see Figures 5-1 through 5-19c). These included ***any illicit drug***, ***any illicit drug other than marijuana***, ***amphetamines***, ***hallucinogens*** (until 1987), ***LSD*** (through 1989), and ***methaqualone***, but *not* ***marijuana***.

- In fact, a crossover was evident for some drugs when 12th graders were compared to young adults. In earlier years 12th graders had lower usage levels, but for some years after 1993 they tended to have higher levels than post-high school respondents for use of ***any illicit drug***, ***marijuana***, ***hallucinogens***, ***LSD*** specifically, ***crack cocaine***, ***tranquilizers***, and ***crystal methamphetamine*** (***ice***). However, they have approached the levels of adults in recent years in most cases.

- ***Cocaine*** (Figure 5-9) gives quite a dramatic picture of change. Unlike most other drugs, active use of cocaine has generally tended to rise with age after high school, usually

peaking three to four years past graduation from the mid-1970s through the mid-1990s. This was a classic example of an age effect. Despite the large age differences in absolute prevalence during that period, all age strata moved in a fairly parallel way through 1991, indicating that a secular trend was taking place in addition to the age effect. All age strata began a sharp and sustained decline in use after 1986—again reflecting a period effect. The two youngest strata (12th graders and 19- to 20-year-olds) leveled by 1992, whereas use continued a decelerating decline for a few years beyond that in the older age groups, signaling the continuation of a cohort effect that began earlier. From 1994 to 1999, annual prevalence of cocaine use rose some in the five youngest strata (i.e., those younger than 27) on a somewhat staggered basis, with the three older groups still decreasing a bit more over that same period. This, to some degree, reversed the age differences that were so prominent in the 1970s and 1980s.

Cohort-related change appears to have predominated in the 1990s, quite possibly as the result of "generational forgetting" of the cocaine-related casualties so evident in the early to mid-1980s. In other words, those in the older cohorts retained that learning experience, but those in the newer cohorts never had it. The fact that from 1994 to 1996 the 35-year-olds had higher lifetime prevalence levels of cocaine use than some of the younger age groups also suggests some lasting cohort-related differences established during the peak years of the cocaine epidemic. From about 2005 or 2006 through 2013 there was a gradual decline in cocaine use in all age bands, but particularly among the younger ages who had earlier attained higher prevalence levels. In 2014, however, there was a significant increase in cocaine use among young adults ages 19 to 30 combined, but not among 18-year olds nor among those older than 30; the increase continued into 2015 (Figure 5-9). This is the first evidence we have seen of a resurgence in cocaine use since the relapse that started in the early 1990s.

Crack use was added to the 12th graders' questionnaires in 1986 and to the follow-up questionnaires in 1987. The decline in annual crack use, which began right after the introduction of these questions, ended in 1991 among 12th graders, and by 1994 it had ended among young adults (Figure 5-10 and Table 5-2). Among 19- to 28-year-olds, the annual prevalence rate held at about 1%, which was down from the peak levels of just over 3% in 1986 through 1988. As was true for a number of other drugs, crack use began to rise after 1993 among 12th graders, at the beginning of the relapse phase in the epidemic, but not in the older age strata until years later, when increases were observed in a somewhat staggered pattern going up the age scale. Again, a cohort effect due to generational replacement seems to have been occurring. Since 1994, 18-year-olds have had the highest-reported rates of use, though they have shown considerable decline since 1999. Among all young adults ages 19-28, crack use had its lowest prevalence in 2013 at 0.3% (compared with 3.2% in 1986), and use has remained at that low level in the two years since.

- A tripwire question asking about use of ***salvia*** in the past 12 months has been included in the study since 2009. Annual use of salvia has declined steadily among the 19- to 28-year-olds from 3.5% in 2009 to 0.6% in 2015, including a significant decline in 2015 (Table 5-2).

- Use of ***heroin*** increased appreciably in 1995 among 12th graders and young adults ages 19 to 24, but not among the older age bands (Figure 5-11). It remained at this higher plateau in these younger age bands through 2000 or 2001, before falling off some, particularly among 12th graders. Among young adults, generally, annual use had previously been quite stable from at least as far back as 1986 through 1994 (Table 5-2), and it stabilized again at a higher level after 1994—a level roughly twice as high as the previous one. Use among 12th graders has declined since 2000, among 19- to 20-year-olds since 2001, and among the 21 to 22-year-olds since 2006, but it remains fairly stable (at a very low rate of use) among the older age groups.

- Among 19- to 28-year-olds, use of ***narcotics other than heroin*** leveled after 1991, following a long period of slow, fairly steady decline (Figure 5-12 and Table 5-2). After 1992 twelfth graders showed an appreciable increase in use, which continued for more than a decade into 2004, while 19- to 20-year-olds showed some increase after 1994, 21- to 22-year-olds after 1996, 23- to 24-year-olds after 1997, and the older age groups after 2000. Thus, cohort-related change appears to have been occurring during the 1990s and beyond for this class of drugs as well, following a long period of secular trends. In 2002, the question text was changed on three of the six questionnaire forms to update the list of examples of narcotic drugs other than heroin. Talwin, laudanum, and paregoric, each of which had negligible rates of use by 2001, were replaced by Vicodin, OxyContin, and Percocet. As a consequence of this revision, reported use rates increased in 2002 as may be seen in Figure 5-12. Data presented for 2002 are from three of the six questionnaire forms with the new wording (which showed higher prevalence rates than the older question did). All six questionnaire forms contained the new wording beginning in 2003, so the data presented for 2003 onward are based on all forms. Although the older version of the question showed no significant changes occurring in 2002, there was a significant increase in narcotics use observed in 2003 (based on the new question in both 2002 and 2003). Among 19- to 28-year-olds, annual prevalence reached a peak level of 9.1% in 2006; it has since fallen to 5.2% by 2015. Some turnaround was observed among 19- to 22-year-olds after 2004 in the use of this important class of drugs, but use continued to rise in some of the older age bands through 2007 to 2009, likely reflecting a cohort effect. Use of these drugs outside of medical supervision remains relatively high in all age groups studied here, with rates of around 4–6% among those ages 18 to 30, also about 6% among those age 35, but somewhat lower at 3.4% to 4.6% among those ages 40 to 55. The most important finding is that use of this important class of drugs has either leveled or declined in recent years in all of the age groups covered in the study with the possible exception of the 55-year-olds, who have the lowest levels of use.

- The annual prevalence rates for ***Vicodin*** and ***OxyContin***, first measured in 2002 (separately from the general question about narcotics other than heroin), were appreciable (8.2% and 1.9%, respectively) for 19- to 28-year-olds. Increases were observed for these two drugs in subsequent years. Among 19- to 28-year-olds (Table 5-2), the annual prevalence of ***OxyContin*** use rose from 1.9% in 2002 to 3.1% in 2004 through 2006—changes that were fairly parallel to those observed among 12th graders over the same interval (when their slightly higher annual prevalence rose from 4.0% in 2002 to 5.5% in 2005). The increases in OxyContin use between 2002 and 2005 were significant for both 12th graders and 19- to

28-year-olds. Annual prevalence was stable from 2004 to 2007 at about 3% for young adults, increased to 5.2% in 2009, but was down to 2.5% by 2015. ***Vicodin*** use rose by less, but started from a higher base, with annual prevalence increasing slightly among 19- to 28-year-olds, from 8.2% in 2002 to 8.9% in 2004; it remained at about 9% through 2009, followed by a decline to 3.8% by 2015. Thus, since 2009 the annual prevalence of both OxyContin and Vicodin among young adults has declined by about half. Given the widespread concern about these narcotic drugs, which are among those most cited in overdose deaths, this downturn is very good news.

- In the late 1970s, ***amphetamine*** use rose some with age beyond high school, but after a long period of secular decline in use from 1981 to the early 1990s, this relationship had reversed (see Figure 5-13). The declines were greatest in the older strata and least among 12th graders, even though use decreased substantially in all groups. As was true for many illicit drugs, amphetamine use began to rise among 12th graders after 1992, and eventually among the 19- to 24-year-olds; but there was only a small increase among 25- to 30-year-old respondents. In other words, another cohort-related pattern of change was beginning to emerge in the 1990s for amphetamines, and the increase in use has really only developed since 2006 among the 25- to 30-year-olds as can be seen in Figure 5-13. While amphetamine use declined a fair amount among 12th graders between 2002 and 2009 (from 11.1% to 6.6%), there was less proportional decline among 18- to 20-year-olds and really no decline among the 21- to 55-year-old age strata. After 2009 there was some resurgence in use, particularly among the younger age groups in 12th grade and college age. It may well be that the use of amphetamines for studying was what cased this resurgence. Use has leveled or begun to decline at most younger ages, with the exception of 21- to 22-year-olds whose use continues to climb; and there is now some increase observable among the 25- to 35-year-olds, quite possibly as a result of a continuing cohort effect. Among those strata ages 40 and older there has been little change in use for more than a decade. At present the age differences in amphetamine use through age 55 are of considerable magnitude and mostly ordinal with 18- to 22-year-olds showing the highest rates of use and those over 30 much lower rates. (See the table accompanying Figure 5-13.)

- Since 1990, when it was first measured, use of ***crystal methamphetamine*** (***ice***) has remained at fairly low rates in the young adult population (Figure 5-14). However, among 19- to 28-year-olds combined, annual prevalence rose from 0.4% in 1992 to 1.6% by 2005, before falling back to 0.5% in 2015 (Table 5-2). Use had been rising among 12th graders and 19- to 20-year-olds specifically between 2000 and 2002, reaching peak levels, but since then their use has declined to low levels. Among those in their twenties, reported use generally declines with age. (Use is not asked of those over age 30.) General ***methamphetamine*** use was first measured in 1999; its use until 2005 was stable among 19- to 28-year-olds, with annual prevalence fluctuating between 2.4% and 2.8%. Use has declined since to 0.7% by 2015 (Table 5-2).

- ***Sedative*** (***barbiturate***) use (Figure 5-15) outside of medical supervision showed a long-term parallel decline in all age groups covered through the late 1970s and 1980s, leveling by about 1988. While use remained low and quite level for most of the age bands for about five years, it began to rise by 1993 among 18-year-olds, by 1995 among 19- to 20-year-

olds, by 1997 among 21- to 22-year-olds, by 1998 among 23- to 24-year-olds, by 2001 among 25- to 28-year-olds, and by 2005 among 29- to 30-year-olds. The same cohort-related pattern of change seen during the 1990s for many other drugs also exists for sedatives (barbiturates); like most other drugs, this pattern was preceded by a long period of secular change during which all age-groups moved in parallel. While use leveled off among most age groups by 2005, the 35-, 40-, and 45-year-olds all showed increases in sedative (barbiturate) use between 2006 and 2008. However, their usage rates leveled after 2008. In 2015 the annual usage rates for the 35- to 55-year-olds were about 2% to 3%. Sedative use among 18-year-olds declined steadily after 2005, among 19- to 20-year-olds after 2008, and among 21- to 22-year-olds after 2009, suggesting another cohort effect. After 2011 the usage rates in most age strata leveled off or even reversed slightly. The 12th graders have consistently had the highest annual prevalence for sedative use without medical supervision.

- ***Tranquilizers*** (Figure 5-16) follow a similar pattern to that just described for sedatives (barbiturates). One difference is that the 12th graders' annual prevalence rate has not always been the highest among the various age groups, as was the case for sedatives (barbiturates), although it was highest between 1994 and 2000 as a result of a greater increase in tranquilizer use among the 12th graders than in the young adult strata. Since about 2004, however, as use rose and then leveled among those in their early 20s, the 12th graders no longer stood out as having the highest rate of tranquilizer use. In fact, the 21- to 22-year-olds or 23- to 24-year-olds had the highest rate in 2005 through 2009; in 2011, the 25- to 26-year-olds had the highest rate; and in 2012 the 27- to 28-year-olds had the highest rate of use. Use then increased among the 29- to 30-year-olds, though they have not yet reached the highest rate. This was another clear example of a cohort-related pattern of change. Now that tranquilizer use has leveled and begun to decline among 12th graders and 19- to 24-year-olds, it is likely that we will see this pattern echoed in the older age groups as a new cohort effect plays out.

- Use of ***anabolic steroids*** has been substantially lower after high school than during 12th grade (Figure 5-17), ever since measures were first introduced in 1991 (in two follow-up questionnaire forms). The age-related differences are not consistent; prevalence rates among the young adult strata are all quite low and do not appear to trend in any systematic way. In general, it seems that the rise in steroid use from 1999 to 2003 among 8th and 10th graders and from 2001 to 2004 among 12th graders was largely specific to those age groups. Annual prevalence rates are now very low for respondents in all young adult strata of ages 19 and older (ranging from less than 0.05% to 1.1%).

- ***Alcohol*** trends for the older age groups (Figures 5-18a–d) have been somewhat different than for the younger age groups in some interesting ways. For *annual* and *30-day* prevalence and ***occasions of heavy drinking***, the declines for the two youngest age strata (12th graders and those one to two years past high school) during the 1980s were greater than for the older age groups. These differential trends were due in part to the effects of changes in minimum drinking age laws in many states—changes that would be expected to affect primarily the age groups under age 21. However, because similar (though weaker) trends were evident among 12th graders in states that maintained a constant minimum

drinking age of 21, the changed laws cannot account for all the downward trends, suggesting that there was also a more general downward trend in alcohol consumption during the 1980s.[5] By 1994, the declines in 30-day prevalence had slowed or discontinued for virtually all age groups until 1997, when they began to turn downward again for 12th graders, and 1999, when they began to decline among 19- to 20-year-olds. The long term declines in the 30-day prevalence of alcohol use have been substantial—from 72% in 1980 to 35% in 2015 among 18-year-olds, and from 77% in 1981 to 48% in 2015 among 19- to 20-year-olds. Since about 1997, as the declines continued in the under-21 groups (that is, those under the minimum legal drinking age), no such declines occurred among the 21 and older groups; in fact, there have been some modest increases in all these groups. These trends have resulted in substantial differences in 30-day drinking rates between those 18 to 20 years of age (35% to 48%) versus those 21 and over (66% to 75%)—much larger differences than when we first looked at them in the 1980s.

- Those respondents three to four years past high school show the smallest downward trend in ***occasions of heavy drinking*** or ***binge drinking*** (i.e., having five or more drinks in a row at least once in the past two weeks) since the early 1980s (Figure 5-18d). One important segment of that age stratum is composed of college students who have shown less decline in alcohol use over the past quarter century (see Chapter 9). In 2015 the binge drinking rate for 19- to 20-year-olds (who are, of course, under the legal age for alcohol possession and, in many states, consumption) is considerably lower (24%) than for those just one to two years older (35%).

 The older age groups generally showed no recent decline in binge drinking rates. Note that the binge drinking trend lines for different age groups (Figure 5-18d) are spread out on the vertical dimension, reflecting large and persisting age differentials (age effects) in this behavior. The relationship with age is curvilinear, however. In recent years the 21- to 24-year-olds have consistently shown the highest rates of binge drinking, and the 25- to 26-year-olds have just about joined them after some years of increasing use going back to the mid-1990s. Binge drinking also had been gradually increasing since the early 2000s among 25- to 30-year-olds, perhaps reflecting a cohort effect that emerged during the period of increasing adolescent binge drinking in the early 1990s. Among 18-year-olds binge drinking has declined considerably since the mid-1990s, and they now have relatively low rates (17% in 2015) as do the oldest age groups (e.g., 19% among 55-year-olds).

 From the early 1980s through the mid-1990s, rates of ***daily drinking*** (Figure 5-18c) fell by considerable proportions in all age strata for which we have data, reflecting a secular trend and an important change in drinking patterns in the culture. Among 19- to 28-year-olds combined, daily drinking declined from 1987 (6.6%) to 2000 (4.1%), and has increased a little to 4.7% by 2015 (Table 5-4). Daily drinking rates rise considerably with age now, and have generally been highest for the 45 and older groups in recent years; daily drinking has declined substantially among 18-year-olds and 19- to 20-year-olds over the life of the study. Despite these declines for young adults up through age 20, daily drinking among 21- to 22-year-olds (which also declined from the early 1980s through the mid-1990s) has

[5]O'Malley, P. M., & Wagenaar, A. C. (1991). Effects of minimum drinking age laws on alcohol use, related behaviors, and traffic crash involvement among American youth: 1976–1987. *Journal of Studies on Alcohol, 52*, 478–491.

increased some since 1995. In 2015 there was a considerable difference among the age strata in rates of daily drinking, ranging from 2% among 18-year-olds to 10%–11% among 50- and 55-year-olds.

It is worth noting that the 35-, 40-, 45-, 50-, and 55-year-olds have had among the lowest rates of binge drinking but among the highest rates of daily drinking in recent years (this is the second year of data for 55-year-olds). These patterns—particularly the high rate of daily drinking—likely reflect age effects as well as perhaps some enduring cohort differences (because these cohorts had considerably higher rates of daily drinking when they were in high school). They may also have been influenced by the widely disseminated medical findings that suggest that one or two drinks per day for males and one per day for females have some benefits for heart health.[6,7] That may be a more salient message for those who are in their forties or above than for younger people. Whether there really are such health effects has been questioned since.[8,9]

- The prevalence rates for ***cigarette smoking*** show more complex trends than most other substances, due to the long-term presence of both cohort and age effects, plus slightly different patterns of such effects on the several different measures of smoking during the past 30 days (one or more cigarettes per month, one or more cigarettes per day, and a half pack or more of cigarettes per day).

 In the earlier years of MTF, the curves across time were of the same general shape for each age band (Figures 5-19a–c), but each of those curves tended to be displaced to the right of the immediately preceding age group, which was two years younger. The pattern is clearest in Figure 5-19c (half pack plus per day) during the late 1970s and 1980s. This pattern is very similar to the one described in *Volume I* for lifetime smoking rates for various grade levels *below* senior year; it is the classic pattern exhibited by a cohort effect,[10] and we believe that the persisting cohort differences are due to the dependence-producing characteristics of cigarette smoking.

 The declining levels of cigarette smoking observed in the 12th grade classes of 1978 through 1981 were later observable in the early-30s age band, as those same high school graduating classes grew older (Figures 5-19b and c). This was true at least through about 1991. By then there had been a considerable convergence of rates across age groups, largely because there were few cohort differences among the senior classes who graduated from the early to mid-1980s through the early 1990s—a period of fairly level cigarette use in high school.

[6]Manttari, M., Tenkanen, L., Alikoski, T., & Manninen, V. (1997). Alcohol and coronary heart disease: The roles of HDL-cholesterol and smoking. *Journal of Internal Medicine, 241*, 157–63.

[7]Savolainen, M. J., & Kesaniemi, Y. A. (1995). Effects of alcohol on lipoproteins in relation to coronary heart disease. *Current Opinions in Lipidology, 6*, 243–50.

[8]Keyes, K., & Miech, R. (2013). Commentary on Dawson et al. (2013): Drink to Your Health? Maybe Not. *Addiction, 108*(4), 723-724.

[9]Goulden, R. (2016) Moderate Alcohol Consumption Is Not Associated with Reduced All-cause Mortality. *The American Journal of Medicine 129*, 180-186.

[10]O'Malley, P. M., Bachman, J. G., & Johnston, L. D. (1988). Period, age, and cohort effects on substance use among young Americans: A decade of change, 1976–1986. *American Journal of Public Health, 78*, 1315–1321.

In addition to these cohort differences, there are somewhat different age trends in which, as respondents grow older, the proportion smoking at all in the past 30 days declines some, while the proportion smoking a half pack per day actually increases. Put another way, many of the light smokers in high school either transition to heavier smoking or quit smoking.[11-13]

The picture was further complicated in the 1990s when it appears that a new cohort effect emerged, with smoking among adolescents rising sharply (beginning after 1991 for 8th and 10th graders and after 1992 for 12th graders). The 19- to 20-year-olds soon showed a rise at the beginning of the 1990s—perhaps responding to some of the same social forces as the adolescents (including the Joe Camel advertising campaign); but 21- to 24-year-olds did not show an increase until about 1995, and 25- to 26-year-olds until about 1996. Young adults over age 26 showed a modest increase from 1997 through 2004, but a decline in use since then; it is quite possible that an upward cohort effect was at least partially offset by a downward secular trend during this period.

After about 1999, smoking rates among nearly all age groups leveled or declined, suggesting that societal forces may be affecting all age groups in a similar way, giving rise to a secular trend. Large increases in the price of cigarettes (due at least in part to sales tax increases[14] and later federal excise taxes) and a great deal of adverse publicity for the tobacco industry are highly plausible candidates, as are the introduction of the national anti-smoking campaign of the American Legacy Foundation, an increase in state and national anti-smoking advertising, the demise of the Joe Camel campaign and all billboard advertising, and the imposition of no-smoking regulations in many public and workplace settings by states and municipalities. Since 2003, thirty-day, daily, and half-pack smoking have all declined among 35-, 40-, and 45-year-olds (Figures 5-19a through 5-19c).

- Apart from cigarettes, none of the other drugs included in the study showed a clear long-term pattern of enduring cohort differences in the earlier years of MTF (the 1970s and 1980s), despite wide variations in their use by different cohorts at a given age. There was one exception; a modest cohort effect was observable for ***daily marijuana*** use (Figure 5-3c) during the late 1970s and early 1980s.[15] But as subsequent classes leveled at lower rates of use, evidence for the cohort effect faded. The emergence in the 1990s of a new epidemic of marijuana use among teens once again yielded a strong pattern of cohort effects. As can be seen in Figure 5-3c, daily use rose sharply among 12th graders and 19- to 20-year-olds after 1992, among 21- to 22-year-olds after 1993 with a sharp rise occurring in 1997, among 23- to 24-year-olds after 1998, among 25- to 26-year-olds after 2000, among 27- to

[11]To illustrate, in the graduating class cohort of 1976, 39% were 30-day smokers in senior year, 39% by ages 19 to 20, but only 28% by ages 31 to 32—a net drop of 11 percentage points over the entire interval. By way of contrast, 19% of that class was half-pack-a-day smokers in senior year, 24% by ages 19 to 20, and 21% at ages 31 to 32—a net gain of five percentage points and two percentage points over the respective intervals.

[12]Bachman, J. G., Wadsworth, K. N., O'Malley, P. M., Johnston, L. D., & Schulenberg, J. E. (1997). *Smoking, drinking, and drug use in young adulthood: The impacts of new freedoms and new responsibilities*. Mahwah, NJ: Lawrence Erlbaum Associates.

[13]Bachman, J. G., O'Malley, P. M., Schulenberg, J. E., Johnston, L. D., Bryant, A. L., & Merline, A. C. (2002). *The decline of substance use in young adulthood: Changes in social activities, roles, and beliefs*. Mahwah, NJ: Lawrence Erlbaum Associates

[14]Huang, J., & Chaloupka, F. J. (2012) The impact of the 2009 federal tobacco excise tax increase on youth tobacco use. NBER Working Paper 18026. National Bureau of Economic Research, Cambridge, MA.

[15]O'Malley, P. M., Bachman, J. G., & Johnston, L. D. (1988). Period, age, and cohort effects on substance use among young Americans: A decade of change, 1976–1986. *American Journal of Public Health, 78,* 1315–1321.

28-year-olds in 2003, among 29- to 30-year-olds in 2005, among 35- and 40-year-olds in 2006, and among 45-year-olds in 2007. This is not unlike the pattern of change for cigarette smoking that occurred in the 1990s (Figure 5-19a). The cohort effect for daily marijuana use may be attributable, in part, to the very strong association between that behavior and regular cigarette smoking. The net effect of all of this is that a considerable age difference has emerged in current daily marijuana use since the early 1990s, when there was practically no difference. The cohort effect resulting from the rise in use among 18-year-olds in the latter half of the 1990s has been working its way up the age spectrum, and in 2010 was observable in the form of a significant increase among 35-year-olds. In 2015, among the 40-, 45-, 50-, and 55-year-olds in the study, 2.5–4.1% reported that they currently smoked marijuana on a daily basis (though many more of them did so in the past) while among those ages 19 to 24, between 6.3% and 7.9% did so.

- In sum, up until 1992, trends in illicit drug use were highly parallel across 12th graders and young adult age groups, indicating a secular trend. (Cigarettes and alcohol showed a different pattern.) Since 1992, however, there has been considerable divergence in the trends for different age bands on a number of drugs as use among adolescents rose sharply, followed by subsequent rises among 19- to 20-year-olds, 21- to 22-year-olds, and so on. This divergence indicates a new cohort effect, quite possibly reflecting a generational forgetting of the dangers of drugs by the cohorts who reached senior year in the early to mid-1990s. Data discussed in Chapter 6, "Attitudes and Beliefs about Drugs among Young Adults," provide additional evidence for this interpretation.

 The resurgence of illicit substance use among secondary school students in the past few years is showing up among the age bands 19–28, but generally not those above age 35.

TRENDS FOR IMPORTANT SUBGROUPS OF YOUNG ADULTS

Four-year age bands are used here to examine subgroup trends in order to yield sufficiently large numbers of cases to permit reliable estimates for the various subgroups being examined. Subgroup data for young adult respondents of each gender and for respondents from communities of different sizes are available for 19- to 22-year-olds since 1980, 23- to 26-year-olds since 1984, and 27- to 30-year-olds since 1988. (Subgroup data are not presented for the ages above 30.) A question about state of residence was added in 1987 to all follow-up questionnaires, permitting trend data to be calculated for the four regions of the country since then. These various subgroup data are not presented in tables or figures here because of the substantial amount of space they would require. However, for the reader interested in more detail, these will soon be available in a separate MTF Occasional paper. Subgroup data on young adults through 2015 are available in *MTF Occasional Paper 87* at http://www.monitoringthefuture.org/pubs/occpapers/mtf-occ87.pdf. That document contains both tabular and graphic presentations of the data, with the graphs, which are by far the easier to read, showing each subgroup in a different color. A verbal synopsis of 2015 data for young adults is presented below.

Gender Differences in Trends

- Over the long term, gender differences narrowed for some drugs among young adults in each of these three age bands, primarily when a steeper decline in use among males (who generally had higher rates of use) occurred in the 1980s. The overall picture, though, is

one of parallel trends, with use among males remaining consistently and modestly higher for most drugs, including the indexes of ***any illicit drug*** use and use of ***any illicit drug other than marijuana*** in the prior year (see Table 5-5, for example).

The downward trend in ***marijuana*** use among 19- to 22-year-olds between 1980 and 1989 was also a bit sharper among males than females, narrowing the gap between the two groups. Annual prevalence fell by 22 percentage points (to 34%) among males, compared to a drop of 14 percentage points (to 31%) among females, leaving a difference of three percentage points. Since 1995, the gender gap has averaged about 5 to 9 percentage points in all three age groups—that is, for 19- to 22-year-olds, 23- to 26-year-olds, and 27- to 30-year-olds.

Similarly, between 1980 and 1993, ***daily marijuana*** use for the 19–22 age group fell from 12.9% to 2.9% among males, and 6.1% to 1.7% among females, narrowing the rather large gap that existed in the early 1980s. As overall use rose after 1993, the gap widened again. Among 23- to 26-year-olds, as daily use first began to increase in 1998 and 1999, the gap between the genders began to widen. In the oldest age group (ages 27–30), the difference had been fairly constant, with daily marijuana use among males generally being about two percentage points higher than among females; however, during the recent period of rising daily use, which began around 2005, the gender gap has widened.

- In all three age bands, use of ***synthetic marijuana*** by males tends to be higher than use by females. In 2011, when use was first measured, it was highest among the 19- to 22-year-olds with males higher than females; it has fallen sharply over the past four years for both genders and the gap between them has closed considerably. Annual prevalence in 2015 for the 19-22 age group was 3.2% for males and 1.4% for females. The two older age bands started out with considerably lower rates in 2011, but also have shown some decline since, narrowing the gender difference among 27- to 30-year-olds (to 1.0% versus 0.5%).

- ***Inhalant*** use, while always quite low in these young adult age groups, has fairly consistently been higher among males than females, though this difference has disappeared in the past few years after a long period of decline in which prevalence is approaching zero.

- For ***LSD***, males have consistently had higher rates of use than females. Among 19- to 22-year-olds, the male–female differences tended to diminish as use declined (from 1980 to 1985 and again from 1999 to 2004) and expand as use increased (1986–1995). In the two older age bands there was less change in use, and differences had been relatively consistent (with males higher) since data have been available, beginning in 1984 for 23- to 26-year-olds and in 1988 for 27- to 30-year-olds. After 1999 and 2001 for the two groups, respectively, overall LSD use dropped, substantially narrowing the gender differences. Males began to show these declines first, and both genders have moved to almost no use of LSD since about 2003.

- Use of ***hallucinogens other than LSD*** taken as a group has consistently been higher among males in all three age strata with the difference growing larger when use increased

some in the late 1990s and early 2000s. The differences have been greatest in the youngest of the three age strata and least in the oldest one.

- ***MDMA (ecstasy*** and more recently ***Molly***) exhibited little or no gender difference in any of the three age bands before use began to grow in the late 1990s. Between then and 2009, there was little gender difference in ecstasy use among 19- to 22-year-olds. In recent years, males have had slightly higher rates of use. In the older age groups, a gender difference opened up after 1997, with males fairly consistently having higher rates of use among both 23- to 26-year-olds and 27- to 30-year-olds.

- The annual prevalence of ***salvia*** use was much higher among males in the 19- to 22-year-olds when first measured in 2009, and somewhat higher in the two older age groups. However, use by males has dropped dramatically in the years since then. Use by females has also dropped, and in 2015 use was negligible except among 19- to 22-year-old males (at 2.3%). Males have had higher rates of ***cocaine*** use than females since MTF began. During the period of sharp decline from the peak levels in annual cocaine prevalence (1986–1993), use dropped more among males than females, narrowing the gender differences that existed. In the 19- to 22-year-old age band, annual prevalence for males declined by 16 percentage points (to 4.5%) versus 13 percentage points among females (to 2.8%) by 1993. In the 23- to 26-year-old age band, there was also a narrowing of the gender difference between 1986 and 1993, with annual prevalence down 19 percentage points among males (to 6.9%) and 13 percentage points among females (to 4.2%). Use in the 27- to 30-year-old group also dropped faster among males between 1988 (when data were first available) and 1997—down 13 percentage points versus 7 among females. In sum, during the period of sharp decline in overall cocaine use, the gender differences—which had been fairly large—narrowed considerably in all three of these age bands. During the resurgence in cocaine use of the 1990s and into the early 2000s, which has occurred on a somewhat staggered basis over the years, the gap between genders expanded only slightly. In 2015 there were only modest differences in cocaine use between the genders among 19- to 22-year-olds, but in the two older strata (ages 23–26 and 27–30) annual prevalence was about twice as high among males as among females.

- ***Crack*** followed a similar pattern during the earlier period of decline, though the proportional difference between the two genders has consistently been higher than for cocaine overall. With crack, though, there was some gender convergence (between 1992 and 1998) among 19- to 22-year-olds, as use among males declined slightly and use among females rose gradually. After 1999, there was no consistent change for some years in differences between males and females. In all three age bands, males consistently had slightly higher crack usage rates, at least until a greater decline among males in recent years has nearly eliminated the differences and brought all of the annual prevalence rates below 1%.

- In 2015 there were practically no gender differences in ***heroin*** use for any of the three age groupings of young adults, just as there were no gender differences when the project first reported results for young adults in the 1980s. In the interim small gender differences arose as a result of greater levels of use for males in the mid-1990s for 19–22 and 23–26

year-olds, and around 2000 for 27–30 year-olds. These differences have since dissipated as levels of use for males have fallen to those of females.

- Among 19- to 22-year-olds, both genders showed some decline in their nonmedical use of ***narcotics other than heroin*** between 1980 and 1991, with a near elimination of previous gender differences (males had been higher). Beginning in 1994, use by males began to rise in this age group, while use by females began to rise a year later. Some gender differences developed as use increased, with use by males being higher; after 2006, as use declined, there was a smaller difference, with annual prevalence in 2015 at 5.4% for males and 3.4% for females. The gender difference may have expanded some after 2012. The picture for 23- to 26-year-olds is very similar except that the increase in use occurred a few years later and there was no divergence between the genders after 2012. The gender difference (males higher) had been eliminated by 1988, but re-emerged after 1995 as use increased more among males. Among 27- to 30-year-olds, there has been a smaller gender difference and the least increase in use in the 2000s. Still, use increased for both genders after 1999, with males emerging with modestly higher rates of use.

- Since 2002, the first year in which the survey gathered data on nonmedical use of ***OxyContin***, its use has generally been higher among males than females for all three age bands. Both genders showed some increase in use between 2002 and 2009 or 2010, followed by some falloff since then in the two younger age bands.

- Nonmedical use of ***Vicodin***, first measured in 2002, also has been higher among males in most years. There was a somewhat larger increase in use among males in all age bands initially, but the males began to trend down earlier than the females, reducing the disparities in use such that by 2015 the gender difference was virtually eliminated in all three age bands.

- In general, there have been no appreciable gender differences in ***amphetamine*** use for some years in any of these three young adult age bands. Between 1981 and 1991, rates of amphetamine use were similar for males and females and showed substantial and parallel downward trends for both genders. Among 19- to 22-year-olds, annual prevalence of use dropped 22 percentage points for males (to 5.2% in 1991) and 21 percentage points for females (to 4.7% in 1991). There were small increases in annual prevalence for both genders in the 19- to 22-year-old age group after 1991, in the 23- to 26-year-old age group after 1995, and in the 27- to 30-year-old age band after 2000, but the genders diverged only slightly (with males higher); amphetamine use has been drifting up slowly in all three age bands since about 2008, with males becoming consistently higher than females, with the divergence among the 19- to 22-year-olds emerging in 2010, which is the age band that contains significant numbers of college students who may be using amphetamines in an attempt to improve their academic performance. In the last two years a small gender difference has emerged among 23- to 26-year-olds, consistent with a small gender difference that emerged earlier in the younger 19- to 22-year-olds starting in 2010.

- Nonmedical use of ***Ritalin***, a prescription stimulant used in the treatment of ADHD, was added to MTF questionnaires in 2002. Its use generally has been slightly higher among

males than females, but the differences nearly disappeared by 2011. The gap reappeared after 2011 among the 19- to 22-year-olds, as use by males increased, and in 2015 use by males jumped significantly among 23- to 26-year-olds, while females showed little change. Among the 27- to 30-year-olds rates of use have been very low and there has not been any consistent gender difference since 2010 (previously males were higher). In 2015 both genders showed some decline in use.

- Like Ritalin, nonmedical use of ***Adderall*** (another prescription stimulant) has generally been slightly higher among males than females since the question was added in 2009. The largest difference was initially among 19- to 22-year-olds, the age band that includes most of those in college. Since 2011 a fair-sized gender difference has emerged among the 23- to 26-year-olds. The gender differences generally have been small among those over age 26.

- A question on ***methamphetamine*** use was introduced in 1999. The youngest age stratum had the highest rate of use for both males and females, with males considerably higher, but it also showed the greatest decline from 2003-2008, particularly among males. By 2011 the rates of use were at or below 1.0% among males and females in all three age bands, and have been 1.8% or less since then. Among the 27- to 30-year-olds, a small gender gap has re-emerged since 2010.

- ***Crystal methamphetamine ("ice")*** was added to the study's coverage in 1990. In the early 1990s, use was low and very similar for both genders in all three young adult age bands. In the mid-1990s the younger two age bands showed a greater increase in use among males, opening a gender gap. The gap then narrowed, though males on average were slightly more likely to report use of crystal methamphetamine until 2005. Since 2009 the gender differences have been small in the two younger age strata, but have re-emerged among the 27- to 30-year-olds. It should be noted that the estimates are a bit unstable for this drug due to limited sample sizes.

- Questions about the use of ***"bath salts***"—stimulant designer drugs (cathinones) meant to mimic the effects of amphetamines—were first introduced in 2012, so there are as yet only limited data on trends in their use. Among 19- to 22-year-olds in 2012 there was a large gender difference in use (annual prevalence of 3.0% among males vs. 0.5% among females); however, there was virtually no gender difference in the two older age bands (0.7% vs. 0.6%, respectively, among 23- to 26-year-olds and less than 0.5% for both genders among 27- to 30-year-olds). In 2013 the large gap between the genders among the 19- to 22-year-olds disappeared as males that age showed a significant 2.8 percentage point decline in use. This decline coincided with a dramatic 18 percentage point increase in the perceived risk of trying bath salts. A similar change in perceived risk occurred among both older groups, as well, no doubt serving to hold their usage rates very low.

- As ***sedative*** (***barbiturate***) use declined through the 1980s, the modest gender differences (males were higher) were virtually eliminated in all three age bands. Beginning in the early 1990s, a staggered increase in use by both genders emerged across all three age groups, with males increasing more than females, thereby again opening a small

difference in the late 1990s and into the 2000s. After declines in the past few years, however, the differences have essentially been eliminated.

- For ***tranquilizers***, both genders showed a long, gradual decline and very similar rates of use from 1980 through about 1993 in all three age bands. Beginning in 1995, use increased for both genders in the 19- to 22-year-old group, followed by an increase beginning after 1997 among 23- to 26-year-olds and after 1999 among 27- to 30-year-olds, again reflecting cohort effects driven by generational replacement. Some gender difference emerged during these periods of increase and during the subsequent decrease after 2002 and 2003 for the two younger age bands. Males generally reported somewhat higher usage rates, though the differences have narrowed in recent years as use has declined. Males generally had somewhat higher rates from 1994 through 2013 among the 19- to 22-year-olds, from 1994 through 2009 among the 23- to 26-year-olds, and from 2004 to 2012 among the 27- to 30-year-olds. These differences have narrowed in recent years.

- ***Inhalant*** use has generally been quite a bit higher among males than females, particularly in the younger age groups. The 19- to 22-year-old group showed a gradual upward shift from 1980 to 1988, followed by a leveling for some years for both genders. In 1997, female inhalant use began to decline among 19- to 22-year-olds, followed by males in 2001; however, the gender gap did not diminish much with this decline until 2005, when there was a convergence. Among 23- to 26-year-olds the gender gap widened as use by males increased between 1992 and 1999, though a subsequent decline in use among males narrowed the gap, almost eliminating it by 2005. It then re-emerged by 2008. In the oldest age stratum, use among males has fairly consistently been slightly higher, though the prevalence of inhalant use is very low by this age (under 0.4% in 2015).

- Use of three "club drugs"—***GHB***, ***ketamine***, and ***Rohypnol***—has tended to be a bit more concentrated among males in all three age strata. But the estimates are not very stable because of the limited numbers of cases upon which they are based. By 2009, prevalence rates were very low for all three drugs, and gender differences were small; this has continued to be the case in the years since then. Rohypnol was dropped from the study in 2010 because of the low numbers of users, at which point no gender difference remained in any of the three age groups. (In earlier years use by males had tended to exceed use by females.)

- For ***alcohol***, ***30-day prevalence*** rates exhibited a gradual, parallel decline from 1981 through 1992 for both genders in the 19- to 22-year-old age group. Thirty-day prevalence fell from 83% to 72% among males and from 75% to 62% among females by 1992. There has been a convergence since then, beginning in the late 1990s, because use by males has declined slightly while use by females increased slightly through 2008. The increasing proportion of women attending college may help to explain this convergence at least in part. The gender difference was virtually eliminated in this age group by 2004 and use has remained quite level since for both genders. In the two older age bands, there was a more modest, parallel decline for both genders, from 1985 through 1992 in the case of 23- to 26-year-olds, and at least from 1988 (when data were first available) to 1991 or 1992 in the case of 27- to 30-year-olds. After 1992, use among males in the older two age bands

showed fairly level rates of use; but use among females rose gradually, considerably reducing the difference among 23- to 26-year-olds (73% vs. 71% in 2015) and narrowing the difference in the oldest young adult group (82% vs. 70% in 2015).

There was also a general long-term decline in ***daily drinking*** from about 1981 or 1982 through about 1992, with daily use falling more among males, considerably reducing but far from eliminating what had been a large gender difference among 19- to 22-year-olds. To illustrate, in 1981, 11.8% of males reported daily use versus 4.0% of females; the comparable 1992 statistics were 5.3% and 2.7%. After 1995, daily drinking began to increase among 19- to 22-year-olds for both genders, but leveled a few years later. From 2002 to 2005 daily use was rising among males and falling among females, increasing their differences, but since 2005 there has been a considerable convergence with daily use among males falling and use among females increasing modestly through 2014. In 2015 there still was a gender difference for daily drinking among the 19- to 22-year-old age group—3.7% for males versus 2.1% for females—but not nearly as large as it was in 1981 (11.8% vs. 4.0%, respectively). The gender differences have been larger and longer lasting for the two older age groups. Among the 27- to 30-year-olds the gender difference has increased since 2000, with use rising for both genders, but to a greater extent among males; in 2015 their daily drinking rates were 12.1% for males vs. 4.9% for females.

There are also long-established and large gender differences in all age groups in the prevalence of ***occasions of heavy drinking*** or binge drinking. Males in the 19- to 22-year-old band have shown some longer term decline in this statistic, from 54% in 1986 to 45% in 1995 to 34% in 2015. Use by females declined less, from 33% in 1981 to 28% in 1995 before rising some to 34% in 2006, and then back to 26% in 2015. Thus, the gender gap has narrowed considerably (from 24 percentage points in 1986 to 17 percentage points in 1995 to just 8 percentage points by 2015). In the two older age bands (23- to 26-year-olds and 27- to 30-year-olds), the sizable gender differences remained mostly stable as the binge drinking rates drifted steadily upward in both genders since the early 1990s, at least until 2009 or 2010. However, these rates have leveled or even declined a bit in both genders among 19- to 22-year-olds for about the past seven years, among 23- to 26-year-olds over the past five years, and among the 27- to 30-year-olds in the past four years. The sustained increase for 23- to 26-year-olds up through 2009 is striking, and may be due at least in part to the increased rate of college attendance and decreased rate of marriage among those in this age group.[16,17]

- Most striking for ***cigarette smoking*** by young adults are the similarities between the genders in both absolute levels and trends. All three age groups showed a long-term decline in ***30-day smoking*** rates for both males and females. For 19- to 22-year-olds, declines occurred from 1980 through 1991 and again since 1999; for 23- to 26-year-olds, declines occurred from 1984 to 1995 and again since 2001; for the 27- to 30-year-olds, declines occurred from 1988 through 2001 and again since about 2006. These staggered

[16]Bachman, J. G., Wadsworth, K. N., O'Malley, P. M., Johnston, L. D., & Schulenberg, J. E. (1997). *Smoking, drinking, and drug use in young adulthood: The impacts of new freedoms and new responsibilities*. Mahwah, NJ: Lawrence Erlbaum Associates.

[17]Bachman, J. G., O'Malley, P. M., Schulenberg, J. E., Johnston, L. D., Bryant, A. L., & Merline, A. C. (2002). *The decline of substance use in young adulthood: Changes in social activities, roles, and beliefs*. Mahwah, NJ: Lawrence Erlbaum Associates.

patterns again reflect a cohort effect moving up the age scale. Among those aged 19–22 years, females had slightly higher rates of 30-day smoking until 1992; but there was a crossover and since 1994 males have had a higher 30-day prevalence of smoking. Since 1998, males 23–26 years old have had a higher 30-day prevalence of smoking than females. Among those 27–30 years old, males have generally had a higher 30-day prevalence, with the gender gap increasing some in recent years.

Male and female trends in ***daily smoking*** rates have also been quite parallel over most of the time for which data are available, particularly in the two older age groups. Among 19- to 22-year-olds there was a crossover after 1993—before that point, females had slightly higher daily smoking rates, whereas males generally did from 1994 onward, primarily because use was rising faster among males through 1999. Both genders in this age group have shown considerable declines since 1999. Among 23- to 26-year-olds, the genders had very similar smoking rates until males started reporting higher daily smoking rates from 1996 on. Males declined less after 1998, opening up a modest gap; however, this gap has narrowed some in recent years as smoking has declined a bit more among males. In the oldest age band, the two genders were quite close until males opened a gap in 2002, and their rate has generally remained somewhat higher since then; in fact, the gap has widened some as use among females has declined slightly more than use among males. In 2015 the prevalence rates for daily smoking in the oldest age band were 12% among males and 9% among females.

Regional Differences in Trends

The respondent's current state of residence was first asked in the 1987 follow-up surveys; thus trend data by region exist only for the interval since then. In this case, changes have been examined for all 19- to 28-year-olds combined to increase estimate reliability. Because gender, for example, crosscuts all regions, it has less sampling error than when the sample is divided into four separate regions. (Each region is represented by between 800 and 2,200 weighted cases in all years. Actual case counts are somewhat higher.) By combining across all ages, we lose the ability to see the cohort effects that have occurred with many drugs, but we are able to see whether overall trends are similar across regions. In general, the changes that have occurred since 1987 have been fairly consistent across regions, particularly in terms of the direction of change. The four regions of the country—Northeast, Midwest, South, and West—have generally moved in parallel. Rather than include the large number of tables or figures necessary to show regional trends, we provide a verbal synopsis instead. The detailed information on subgroup trends through 2015 are available in graphic and tabular forms in *MTF Occasional Paper 87*, which may be accessed at http://www.monitoringthefuture.org/pubs/occpapers/mtf-occ87.pdf.

- There were substantial drops among young adults in all four regions between 1987 (the initial measurement point) and 1991 for ***any illicit drug***, ***marijuana***, ***any illicit drug other than marijuana***, ***cocaine***, ***crack***, and ***amphetamines***. After 1991, most or all regions showed some increase and then a leveling in the use of these drugs (except cocaine, which continued to decline through the mid-1990s, inched up thereafter, remained fairly level through 2006, and has declined since).

The proportions of 19- to 28-year-olds using ***any illicit drug*** have been consistently lowest in the South and highest in the West and Northeast; but the regional differences have been fairly modest. For example, in 2015 the Northeast had the highest annual prevalence at 44% while the South was lowest at 36%.

- For ***marijuana*** use, the South has consistently been lowest, and the Midwest consistently has been second lowest. Generally, the other two regions have been fairly close to one another. However, the differences have generally not been great. The 2015 annual prevalence rates ranged from 18% to 23%.

- For the use of ***any illicit drug other than marijuana***, the West stood out as consistently highest until 2000, with the other three regions being very similar; since 2001, use in the Northeast generally has been about as high as in the West, though the regional differences are not large and the regions have moved in parallel.

- Data on use of ***synthetic marijuana*** have been gathered since 2011. These data show a considerable decline between 2011 (when annual prevalence ranged from 5.5% in the Northeast to 9.7% in the Midwest) and 2015 in all four regions. There remains little difference among the regions in annual prevalence, which ranges from 0.5% to 2.1% in 2015.

- From 1987 (when data were first available) through 1994, rates of ***inhalant*** use remained relatively stable, quite low, and about equal in all four regions among 19- to 28-year-olds. Annual use then rose in the Northeast in 1995 and 1996 and remained higher than in the other regions through 2000, before dropping back to rates comparable to the other three regions. Except for that divergence, the regions have moved very much in parallel for this class of drugs. Annual prevalence in 2015 is at low levels in this age group, ranging between 0.5% in the Midwest and 1.3% in the West.

- From 1987 (when data were first available) through 2001, the West had the highest level of *lifetime* prevalence for ***LSD***. From 1991 through 1995, the West had slightly higher *annual* prevalence rates of LSD use than the other three regions among young adults (use dropped in 1995 in the West). Otherwise the usage rates have been quite similar in all four regions; all showed sharp declines in LSD use after 2001, though use had been declining some in all regions for several years prior to that. From 2009 through 2014 the Northeast had a slightly higher annual prevalence of LSD use than the other three regions, but this difference was no longer present in 2015.

- ***Salvia***, which was first measured with a tripwire question in 2009, showed a continuous decline from 2009 through 2013 in the West (which started out highest) and the South. Use began to decline in the Midwest after 2010 and in the Northeast after 2011. Use was very low in all regions by 2015 at 0.8% or less annual prevalence, compared to 2.5% to 5.4% in the four regions in 2009.

- Questions about ***MDMA*** (***ecstasy*** and more recently ***Molly***) were added to the follow-up surveys of young adults in 1989. Through 1993, rates were highest in the West and South

and lower in the Northeast and Midwest regions. Subsequently, use in the Northeast began to increase (as was true among 12th graders), exceeding levels of use found in the South and West from 1999 to 2001. The Midwest has quite consistently had a much lower level of ecstasy use than the other three regions, although it was joined by the South in recent years. In 2000 all four regions showed a sharp and fairly parallel increase in ecstasy use; the rise decelerated in 2001 and began to decline thereafter in all regions. As discussed elsewhere, we believe that this decrease may have been caused by growing concern about the hazards of ecstasy use. By 2003, little regional difference remained in annual prevalence, largely because the declines in use were most pronounced in the Northeast and West. By 2007, use was down a little more in all regions; but after 2007 ecstasy use generally was increasing in the West until it leveled after 2012, and a similar trend occurred after 2010 in the Northeast as well, thereby reopening regional differences. In 2015 annual prevalence rates among young adults were 6.3% in the West, 5.0% in the Northeast, 3.8% in the South, and 2.9% in the Midwest.

- The considerable declines in ***cocaine*** use, observed in all regions between 1987 and 1991, were greatest in the two regions that had attained the highest levels of use by the mid-1980s—the West and Northeast. These regional differences had diminished considerably by 1992 after a large overall decline in use had taken place. Similar to the finding for 12th graders, in 1992 the decline in annual prevalence stalled in all regions except the Northeast. A gradual further decline then occurred in all regions through 1996 (1997 for the West) before a slight rise began to occur, likely reflecting the effects of generational replacement. Regional variability in annual cocaine prevalence was minimal for some years after the mid-1990s, but since 2005, use in the Midwest and South has declined more than in the West and Northeast, creating some regional difference. Annual prevalence for the young adult age band in 2015 was 8.0% in the Northeast, 7.4% in the West, 4.5% in the South, and 3.9% in the Midwest.

- All four regions also exhibited an appreciable drop in ***crack*** use between 1987 and 1991, again with the greatest declines in the West and Northeast, where prevalence had been the highest. Use then generally leveled in all regions except the South, where it continued a gradual decline through 1997. As was true for cocaine generally, for crack use the annual prevalence rates among the regions have converged and are at very low levels, ranging from 0.2% to 0.9% in 2015. (Through 2013, lifetime prevalence of crack use generally has been highest in the West since crack use was first measured in 1987, as has been true for cocaine in general.)

- The regions have trended fairly similarly in their prevalence of ***amphetamine*** use by young adults. The only modest exception was that use declined more in the Northeast (which started out lowest) in the period 1987 to 1992, giving it a substantially lower rate than the other three regions; it remained lowest until 1998. The West fairly consistently had the highest rate through about 2000, although not by much. By the late 1990s, the Northeast had caught up to the Midwest and South, making the regional differences very small; there have been essentially no regional differences since 2000. In 2015 the annual prevalence rates ranged between 7.7% and 8.0%.

- ***Methamphetamine*** use has been measured only since 1999 (though crystal methamphetamine, discussed next, has been in the study for a longer interval). It shows some differences in rates among the regions and some differential trending, with a gradual decline in annual prevalence in the Northeast (where use has generally been lowest) and a gradual increase in the West (where use has usually been highest) from 2000–2004, after which use declined in the West. Use in the other two regions remained fairly flat until 2006, when both showed some decline. Use in the West has fallen since 2006, leaving very little variability among regions by 2015. (*Lifetime* prevalence reached particularly high levels in the West, starting at 16% in 1999, and declining fairly steadily to 3% in 2015.) Annual prevalence now ranged from 0.0% in the Northeast to 1.7% in the West in 2015.

- The West also consistently has had the highest rates for ***crystal methamphetamine*** (***ice***) use, and the regional differences have been very substantial, particularly in terms of lifetime use. The Northeast has generally had the lowest rates. When data were first available on crystal methamphetamine in 1990, the West had a lifetime prevalence of 5.1% versus a range of 1.7% to 2.3% in the other three regions. By 2006, the lifetime prevalence rate in the West had increased to 8.8%, and lifetime prevalence in the Midwest and South grew quite steadily over that interval. This strongly suggests that crystal methamphetamine use among young adults diffused from the West primarily to the South and Midwest regions, but diffused much less to the Northeast, which has had the lowest prevalence since 1998. The annual prevalence figures tell a similar story, but also show that there was a spike in past-year use in the West from 1991 to 1995 before use there declined and then stabilized at around 2% from 1997 through 2001. Rates then rose again in the West between 2001 and 2003 and stabilized at a higher level around 2.7%. Since 2006, use in the West declined, narrowing the differences among regions. In 2015, annual use of crystal methamphetamine stood between 0.0% and 0.7% across all regions.

- ***Bath salts*** (synthetic stimulants sold over the counter) were first included in the study in 2012 and showed some regional variation, though all regions had an annual prevalence of use below 1.7%. Use by young adults was highest in the Northeast at 1.6% in 2012, but use in all regions has fallen from the 2012 levels, and the differences among regions are now minor.

- The annual prevalence for ***sedatives*** (***barbiturates***) remained flat, and at about equivalent levels, in all four regions of the country from 1987, when first measured, through 1994. Rates then rose gradually and in parallel in all regions for a number of years until about 2003, followed by some leveling and then some decline since 2008; regional differences have been consistently small. In 2015 annual prevalence ranged from 2.5% to 2.8%.

- The picture for ***tranquilizers*** is similar to that for sedatives (barbiturates). Annual prevalence generally held fairly steady in all regions from 1987 through 1993, even though lifetime use was declining steadily in all regions through 1997. After 1993 there was some increase in all regions, with the South experiencing the most increase through 2004, after which all regions showed a leveling in use, followed by a gradual decline in use since about 2007. The regional differences have been small, though they grew a bit larger during

the period of increasing use in the late 1990s, primarily because the South showed a greater increase than the other regions and had the highest rate of use for some years. Annual prevalence rates in 2015 ranged from 4.8% to 5.2%.

- Levels and trends in ***heroin*** use were quite comparable across the four regions from 1987 through 2006. All regions had low and stable rates through the early 1990s. A gradual increase was observed from about 1993 through 2000, during the relapse phase in the overall drug epidemic, and annual prevalence was fairly stable in all regions through roughly 2004. After that, there was a steady increase in heroin use in the Northeast from 0.4% in 2004 to 1.1% in 2009, and also an increase in the West, from 0.3% in 2004 to 0.8% in 2009. After 2009 young adults in these two regions continued to have the highest prevalence of heroin use through 2012. In 2013, use continued to rise in the Northeast bringing its annual prevalence up to 1.8%, compared to 0.2% to 0.5% in the other three regions. This rise in the Northeast is consistent with statements by governors in the Northeast that they were facing a rising level of heroin use. The rate in the West fell back to 0.5% in 2013. In 2014 there was a significant decline in annual prevalence in the Northeast, leaving it only slightly higher than the other regions (at 0.6% vs. 0.3%–0.4%). In 2015 the Northeast showed a small and non-significant rise back to 1.1% while the other regions remained level at 0.3% to 0.4%

- Trends in prevalence of the use of ***narcotics other than heroin*** have been quite parallel for the four regions. After a period of slight decline between 1987 and 1993 in all regions, a gradual, long-term, and substantial increase occurred from the mid-1990s through 2003 or 2004, depending on the region, with little systematic change through 2010, at which point use began to decline gradually in all regions—a decline that continued up through 2015. The South has tended to have the lowest prevalence of use since 2003, with the other three regions being tightly grouped; however, all regions were about the same in 2015, with annual prevalence rates ranging from 5.0% to 5.4%.

- The annual prevalence of ***OxyContin*** use was highest in the Northeast and lowest in the West in 2002, when it was first measured. Use rose some in all regions through about 2009, and it has shown a substantial decline in all regions since then. The Midwest had the lowest prevalence rate from 2010 through 2012, but has been about average since then. The four regions were fairly tightly grouped in 2015, with annual prevalence ranging from 1.4% to 3.3%. In general, regional differences have not appeared very consistent due to the limited sample sizes.

- Annual prevalence of use ***for Vicodin*** showed considerable variation among the regions between 2002, when it was first measured, and 2010. The West and Midwest generally had the highest rates, with the South the lowest and the Northeast in between. However, the West and Midwest have shown declines in use since 2005 and 2006, respectively, narrowing the differences; the South continued to have the lowest level of use. Annual prevalence rates in 2015 ranged from 2.2% in the South to 4.2% in the West to 4.4% in the Northeast and Midwest. (It should be noted that the sample sizes are more limited than usual for Vicodin and OxyContin, because questions about their use are contained on only two of the six questionnaire forms. As a result, the trends are a little less smooth.)

- When two club drugs, ***ketamine*** and ***GHB***, were first measured in 2002, the Northeast stood out as having a higher rate of annual use (especially so for ketamine); but use in the Northeast dropped over the next two years, bringing that region's usage rates down to the same very low levels as the other three regions. There appears to have been a little resurgence of ketamine use between 2008 and 2010 in all regions except the Midwest, followed by a decline in all regions in 2011. In 2012 through 2015 ketamine use stood higher in the Northeast than in the other regions. GHB use also appeared to rise in the Northeast in 2012, but use then fell back in 2013. No region had an annual prevalence above 0.3% in 2015 for GHB or above 1.0% for ketamine.

- *Note: Questions about the use of Rohypnol were discontinued in 2010.* ***Rohypnol*** use remained very low in all four regions from 2002, when it was first measured, through 2009, not reaching 1% in any region. For this reason, questions about its use were dropped from the surveys in 2010 to make room for other drugs.

- With respect to ***alcohol*** use, there were modest declines in 30-day prevalence in all four regions between 1987 (when the first measurement was available for 19- to 28-year-olds) and 1992. The rates for 30-day prevalence among young adults then leveled in all regions. The West and South have consistently had lower rates of 30-day use than the Northeast and Midwest (as has generally been true among 12th graders).

 Current ***daily use*** of alcohol also showed a decline from the first (1987) data collection through about 1994 or 1995 in all regions. The proportional declines were substantial—on the order of 40–50%. (This decline corresponds to a period of appreciable decline in daily drinking among 12th graders, though we can tell from their longer-term data that their decline started in 1980; thus the decline may well have begun earlier among 19- to 28-year-olds as well.) After the mid-1990s there was some upward trending in daily prevalence in all regions through about 2007 or 2008, followed by a leveling. In 2015 the four regions had rates of daily alcohol use between 3.6% and 5.3%.

 Occasions of heavy drinking (or binge drinking) was fairly level in all regions between 1987 and the late 1990s or early 2000s. There were then some modest increases through about 2006, followed by a leveling and even a slight decline, particularly in the West. The rates have consistently been appreciably higher in the Northeast (35% in 2015) and Midwest (39%) than in the South (28%) and the West (26%).

- There have been highly consistent regional differences among young adults in ***cigarette smoking*** since data were first available in 1987—they exist for monthly, daily, and half-pack-daily prevalence rates. The West has consistently had the lowest rates of *daily prevalence* (e.g., 6% in 2015, compared to 10–11% in the other three regions), with the Northeast and Midwest generally a little higher than in the South. The South, however, showed less decline in recent years than the Midwest and the Northeast, eliminating the difference with the Northeast by 2008, and by 2015 the South shared the highest level with the Midwest at 11.2% and 11.3%, respectively. After some slight decline in *30-day prevalence* in all regions between 1987 and 1989, rates leveled off for about five years

(roughly through 1994). There then followed a very gradual increase of a few percentage points through 1998, followed by a gradual decrease—likely reflecting cohort effects resulting from the changes in smoking during the high school years. *Daily* use showed a very similar pattern. For *half-pack-a-day smoking*, the decline phase was longer (from 1987 through about 1992 or 1993), likely reflecting the lag between smoking initiation and regular heavy smoking. Since 1998, half-pack smoking rates have gradually declined in all four regions. The gradual declines in daily smoking have cumulated and have been important. Between 2004 and 2015, daily prevalence fell among young adults from 23% to 10% in the Northeast, 24% to 11% in the Midwest, 20% to 11% in the South, and 16% to 6% in the West. In general, all of these measures have shown parallel movements across regions, suggesting that the forces accounting for whatever changes there have been are nationwide in scope. It should be remembered that, as illustrated earlier in this chapter, there are strong cohort effects in smoking that are obscured to a considerable degree when we combine age groups across a 10-year age span, as we have done in the present analyses.

Population Density Differences in Trends

The analyses presented here for population density return to the use of four-year age groupings, which allows a longer time interval to be examined for the younger strata and for cross-age comparisons of the trends. Among young adults, five levels of population density are distinguished based on the respondent's answer to the question, "During March of this year did you live mostly . . ."; answer alternatives were "in a very large city (over 500,000 people), in a large city (100,000 to 500,000), in a medium-sized city (50,000 to 100,000), in a small city or town (under 50,000), or on a farm/in the country". Data on the suburbs of cities of each size were combined with the corresponding city. These various subgroup data are not presented in tables or figures here because of the substantial amount of space they would require. Rather, a verbal synopsis of what they contain is presented. More detailed information on subgroup trends will soon be available in graphic and tabular form in an MTF Occasional Paper. Subgroup data from 2015 are available in *MTF Occasional Paper 87*, which may be accessed at http://www.monitoringthefuture.org/pubs/occpapers/mtf-occ87.pdf.

- The proportions of young adults using ***any illicit drug*** for the most part have moved in parallel among the various community-size strata. In general, the farm/country stratum has tended to have the lowest use. The other four community-size strata have tended to differ little from one another, though the very large cities have generally ranked at the top in all three age bands. In 2015, the proportions of 19- to 22-year-olds reporting use of an illicit drug in the past year were 27% for the farm/country stratum, 38% for small towns, 44% for medium-sized cities, 43% for large-sized cities, and 49% for very large cities. Since 2012 the very large cities have shown more of an increase in use than the other strata.

- Trends in the use of ***any illicit drug other than marijuana*** tell a similar story. There was a long period of fairly parallel declines along with some convergence of usage rates among the community-size strata at all three age levels (among 19- to 22-year-olds it was between 1981 and 1992), followed by an increase in use and more recently a leveling. In general, medium, large, and very large cities have all tended to have about the same rates, and the farm/country stratum has tended to have the lowest rates, particularly prior to 1990; the

differences by population density have been quite small since about 2000, ranging from 16% to 20% prevalence across the different community-size strata among 19- to 22-year-olds in 2012, for example. However, in 2014 there was a significant increase of 8.1 percentage points among 23- to 26-year-olds in very large cities, and increases there in the other two age groups as well. Indeed, there were increases observed in four of the five community size strata in each of the three age bands in 2014, reflecting the overall rise in 2014 in this measure noted above; but in 2015 there was a decrease in several strata in all three age groups, including in very large cities.

- ***Marijuana*** use has moved pretty much in parallel among the various community-size strata over the time intervals for which data exist. Among 19- to 22-year-olds, the annual prevalence rates have been quite close among communities of all sizes, except for the farm/country stratum. This most rural stratum has fairly consistently had the lowest rate of marijuana use in all three age groups, while the very large cities have generally had the highest rates. Use in the farm/country stratum fell less in the decline period during the '80s and rose more slowly in the subsequent increase than in the other community-size strata, first narrowing and then increasing the gap. Among all three age strata annual prevalence of marijuana use is ordinally related to population density. For example, among 23- to 26-year-olds it is 24% among the farm/country stratum and rises to 46% in the very large cities in 2015.

- ***Daily marijuana use*** has also moved largely in parallel among the five population-density strata within each age band. The population-density strata all showed some decline in daily use from 1980 through about 1992, an increase from 1992 through 1995, a leveling for a couple of years, then a decline from about 2003 through 2007. Since 2007 (2005 in the case of the rural areas), however, there has been some upward trending in daily marijuana use among the 19- to 22-year-olds across all population-density strata but less among the older strata. The differences among the age groups likely reflect cohort differences, at least in part.

- ***Synthetic marijuana***, such as "K-2" and "Spice," was added to the study in 2011, so only five years of data exist so far. The farm-country stratum had the highest annual prevalence initially in the two youngest age bands, but their use fell sharply and significantly in the years since. In 2015 the annual prevalence rate among 19- to 21-year-olds ranges from 0.0% to 2.8%. In fact, use in all community size strata declined appreciably among the 19- to 22-year-olds. In the older age groups, use started from a lower level and generally has fallen in all community size strata as well, such that in 2015 annual prevalence ranged from 0.0% to 1.8% among 23- to 26-year-olds and from 0.1% to 1.6% among 27- to 30-year-olds.

- In general, there have not been large differences in ***LSD*** use among young adults as a function of community size since 1983. Among 19- to 22-year-olds (the young adult age group with by far the highest rates of LSD use prior to 2003), use in communities of all sizes declined appreciably in the early to mid-1980s, particularly in the urban strata, eliminating modest prior differences by 1984. From around 1989 through 1996, there was some increase in LSD use in all population-density strata among 19- to 22-year-olds, with

the most rural areas generally continuing to have the lowest prevalence of use. After 1997, there was some decline in LSD use in all community-size strata among 19- to 22-year-olds, followed by a sharp decline occurring from 2001 to 2003, with all strata moving in concert. The 23- to 26-year-old respondents had some modest increases after 1989 in all community-size strata, though the increases had virtually ended by 1995. Since about 1999, there have been declines in all strata, with the largest decline occurring from 2001–2003 in most strata. In *Volume I* in this series, we discussed how a sharp decline in supply may be responsible for the sizable decline in use among all ages after 2001. In the oldest age group, LSD use has remained very low and for the most part quite stable, but also with some decline after 2001; there has been very little difference among the community size strata.

- The use of ***hallucinogens other than LSD***, taken as a class, has also shown considerably higher rates in the youngest age band compared to the two older ones, suggesting a consistent sharp falloff in use with age—an *age effect*. (The drug most often reported in this general class has been psilocybin or *shrooms*, as is true among 12th graders as well.) Use of this general class of drugs fell in communities of all sizes among young adults between 1980 and about 1988. Then there was a leveling of use for a few years, followed by an extended increase in use among all community-size strata in the 19- to 22-year-old age band. By 2003 the rates attained by each stratum exceeded those originally observed in 1980; there have been declines since then, and very large cities (which had attained the highest usage rates) were the last to show the decline. The 23- to 26-year-old group showed slightly rising rates of use between 1998 and 2004, followed by a leveling. The sharpest increase occurred in the very large cities in 1999 and 2000 and again in 2010. The 27- to 30-year-olds have generally had low rates of use, and the trend lines were very flat with only minor community-size stratum differences until 2001, when all strata, especially the very large cities, began to increase before leveling after 2005. All three age groups have shown higher rates of use than previously observed—since 1994 for 19- to 21-year-olds, since about 2000 for 22- to 26-year-olds, and since about 2002 for 27- to 30-year-olds—in part reflecting a cohort effect in the use of these drugs, but also reflecting the change in question wording to include "shrooms" (a street name for psilocybin) as an example. The farm/country stratum has generally had the lowest prevalence among the three strata and the very large cities the highest.

- ***Salvia*** (or ***salvia divinorum)*** use was first measured in 2009 and has shown somewhat irregular trend lines since then. The overall picture is clearly one of decreasing use since 2009 in the youngest age group and since 2010 in the middle age group. Annual prevalence rates are now very low for this drug—from 0.0% to 1.7% among 19- to 22-year-olds, and from 0.0% to 0.8% among the 23- to 26-year-olds.

- ***Ecstasy*** (***MDMA***) use was first measured in 1989, and since then has shown the largest increase of any drug among young adults. Among 19- to 22-year-olds use in 1989 was highest in the very large cities (5% annual prevalence), but prevalence declined in all population-density strata between 1989 and 1994 (to 1.6% or less). By 1998, use had begun to increase in all community-size strata within this age band, except in the farm/country stratum. The farm/country stratum moved up sharply in 1999, but then the

three most urban strata jumped sharply in 2000, opening a fair gap in use with large and very large cities having rates nearly twice as high as any of the other strata in 2002. All community-size strata showed large declines in ecstasy use after 2000 or 2001, which lasted through 2004, narrowing the differences among them. In 2011 among the 19- to 22-year olds, 2012 among the 23- to 26-year-olds, and 2014 among the 27- to 30-year-olds, ecstasy use in the very large cities rose sharply and has stayed highest there in the years since. The recent increase in the very large cities has again opened the differences and the large cities followed suit since 2011 in the two younger age groups. Among the 23- to 26-year-olds, all population-density strata continued to decline, or at least remain level, through 2003, and then stayed level through 2008. Considerably less increase in ecstasy use occurred among 27- to 30-year-olds, though there was some increase in the largest cities starting after 1996 and in the large and medium-sized cities after 1999. From 1997 through 2005 the very large cities stood out as having the highest rates of ecstasy use, but the differences were modest through 2012. *It thus appears that over the past several years ecstasy use has made a comeback among young adults in the country's very large cities and more recently in the large cities.*

Ecstasy use trends tell an interesting story. In very large cities use peaked in all three age bands in 2000 and then began to decline. The medium-sized cities were beginning to level or decline by 2001 in the two younger age bands. The small town and farm/country strata peaked in 2001 in all age groups. These data support our belief, based on school-level analyses of secondary schools, that the presence of this drug was still diffusing geographically—in this case, from more urban to more rural areas—and, were it not for this continued diffusion, ecstasy use would actually have begun to decline nationally a year earlier. The data from 12th graders on perceived risk provide the clue as to the most likely cause of this turnaround; they showed a large jump in the level of perceived risk associated with ecstasy use from 2000 through 2003. Unlike most other drugs discussed here, the pattern of change since the mid-1990s appears to reflect secular trends rather than cohort effects, with all age groups moving largely in parallel—that is, until the recent resurgence of use in the very large cities which has been staggered across the age bands consistent with a cohort effect.

- In the early 1980s, ***cocaine*** use was positively correlated with population density, with the highest use in the very large cities. The important drop in cocaine use that began after 1986 slowed considerably after 1992 or 1993 in all three age strata and in communities of all sizes, by which time the positive association with population density had been virtually eliminated. Among 19- to 22-year-olds there was a sustained increase in cocaine use among all community-size strata after about 1993 or 1994, and among 23- to 26-year-olds after about 1998. There was some decline in the mid-2000s in all strata except large cities, which showed a decline in subsequent years. As just stated, usage rates among the population-density strata tended to converge considerably during the period of decline; this convergence remains, except for the very large cities, which since 2007 have shown rates of cocaine use somewhat higher than the less densely populated areas in all three age bands. In the 27- to 30-year-old age group, a gradual increase in use emerged in nearly all population-density strata after 2000, no doubt reflecting a cohort effect working its way up the age spectrum. By 2004, all of the strata in the oldest age band leveled or declined

from their peak rates; the single exception was very large cities, where use remained relatively high and even increased in 2014. In 2015 the very large cities had the highest annual prevalence across all three age groups (7.5%, 12.7%, and 7.5%, respectively, from youngest to oldest).

- ***Crack*** use among all age groups peaked in 1987 or 1988 (strongly suggesting a secular trend at work at that time) and then, after declining appreciably, bottomed out in all population-density strata for several years. Use reported in these young adult samples at all three age levels has borne practically no systematic association with community size, and for the most part the strata have all tended to move in parallel. In 2015, annual prevalence was at or below 0.9% across all strata in the older two age bands, and among 19- to 22-year-olds use was at or below 0.6% in all strata. In the youngest age band of young adults crack use has tended to be highest in the farm-country stratum.

- ***Amphetamine*** use showed virtually no differences associated with urbanicity in any of the three age groups, and this has generally been true since 1983-2012. The trend curves were highly similar for all levels of population density within each age stratum, with the single exception that among the 23- to 26-year-olds the three urban strata exhibited the greatest increase in amphetamine use of the five strata after 2008; they were joined by the small town stratum in 2012, leaving the farm/country stratum with the lowest rate of use. Also, the 19- to 22-year-olds in the very large cities showed a sharp increase in use in 2013 and 2014, with annual prevalence reaching 14.6% in 2014, compared to 8.0 to 10.1% in the other age strata. The large cities also have shown a rise in use since 2008, including in 2015, and both of these urban strata showed a recent increase in use, while the farm/country stratum has remained lowest in use.

- Differences in use of ***crystal methamphetamine*** (***ice***) as a function of population density have been quite erratic across time in all four age groups, particularly in the earlier years of collecting such data, due to limited sample sizes. Since 2007, reported rates of use have been relatively low in all strata and age bands. Since the late 1990s, the farm/country and small town segments have tended to have the highest rates of crystal methamphetamine use in the two older age bands.

- The use of ***methamphetamine*** in any form has been measured only since 1999. In general, the farm/country stratum has had higher than average rates of use in the two youngest age groups, and more recently in the oldest age band between 2010 and 2015; otherwise there has been little systematic difference. Among 19- to 22-year-olds, all community-size strata have shown substantial declines in use since 2003 or 2004, reaching very low levels by 2007 and thereafter. Use has declined some over the same interval among 23- to 26-year-olds. Among 27- to 30-year-olds use generally declined from 2002 to 2006 in all population-density strata; after 2009, this group showed a slight rebound in use, particularly in the farm-country stratum.

- ***Bath salts*** were added to the study in 2012, so trends are available only since then. They showed a high rate of use (6.5% annual prevalence) in 2012 in the farm/country stratum among 19- to 22-year-olds, but a significant decline in 2013 such that there are now

practically no differences among the different levels of population density. Among 23- to 26-year-olds, use started highest in 2012 in small towns and farm/country areas, but dropped there the next year. Usage rates are very low among the two older age bands with little variability by population density. These findings suggest that this type of drug use tended to be concentrated among younger people and in more rural areas, but also that bath salts are no longer as great a threat to public health.

- *Note: Methaqualone was dropped from the study in 1990.* ***Methaqualone*** use, which in 1981 was strongly positively associated with population density, dropped to annual prevalence rates of 0.8% or below in all community-size strata for all three age bands by 1989. For that reason, its use is no longer measured in MTF.

- Unlike methaqualone, ***sedatives*** (***barbiturates***) have never shown much variation by population density, at least as far back as 1980. This remains true in all three age bands, with the single exception that among 19- to 22-year-olds use in the farm country areas has broken out as highest since 2011. Otherwise the trends have been similar within each age band.

- ***Tranquilizer*** use among young adults has also had little or no association with population density over the time interval under study. Like sedatives (barbiturates), there was an earlier period of decline, staggered inflection points, a long period of gradual increase, and then a leveling staggered up the age band from about 2003–2005. In recent years tranquilizer use has been somewhat lower in the farm/country stratum in the two older age groups.

- From 1980 to 1995, annual ***heroin*** prevalence was less than 1.0%—usually much less—in all population-density strata for all three age bands. After 1994, use among 19- to 22-year-olds in all community-size strata rose and reached 1.0% in the three most urban strata by 1998. In fact, in the very large cities, it reached 2.1% in 2000 (vs. 0.3–0.6% in the other strata). Use levels have been lower among 23- to 26-year-olds and lower still among 27- to 30-year-olds, making it difficult to discern systematic differences among the population-density strata in those age bands. In 2015 the annual prevalence of heroin was 1.3% or lower in all community-size strata for all three young adult age bands, and it was much lower in most. Over the past four or five years for nearly all community-size areas, there was some increase in use among the 23- to 26-year-olds (particularly in 2010). Among the 27- to 30-year-olds there was some increase in heroin use in 2014 and 2015 in small towns, though not significant.

- The annual use of ***narcotics other than heroin*** had some positive association with population density among 19- to 22-year-olds through the early 1990s; however, it has shown rather little systematic association since then. Use of narcotics other than heroin increased substantially in all community-size strata after 1993 in the case of 19- to 22-year-olds, after about 1996 in the case of 23- to 26-year-olds, and after about 1998 in the case of 27- to 30-year-olds; however, no systematic differentiation by community size was evident during those periods of increasing use. Clearly a cohort effect was at work, and the increasing use of these drugs was quite widespread. Use leveled off since about

2004 in the youngest age band, 2006 in the middle age band, and 2007 in the oldest age band.

- Sample sizes for two of the narcotic drugs of particular interest, ***OxyContin*** and ***Vicodin***, are not sufficient to estimate population-density differences or trends with a reasonable degree of accuracy.

- The absolute levels of ***inhalant*** use have remained low in these age groups, particularly above age 22. However, during the mid- to late 1980s, there was a gradual increase in use among 19- to 22-year-olds in all community-size strata. No strong or consistent association with population density has appeared, though the very large cities have not infrequently had higher rates than the other areas among 19- to 22-year-olds, particularly in the period 1998 through 2000. Among both the 19- to 22-year-olds and the 23- to 26-year-olds, there has been some falloff in inhalant use since the late 1990s in all population-density levels.

- There have been few differences as a function of population density in the *annual* and *30-day* prevalence of drinking ***alcohol*** among 19- to 22-year-olds since data were first available in 1980, except that the farm/country stratum has tended to have lower-than-average use. In the two older age bands, however, there has been a fairly consistent positive correlation between population density and use of alcohol in the past 30 days—though not a very strong one. So, for example, in 2015, 63% of 27- to 30-year-olds in the farm/country stratum had alcohol in the prior 30 days, compared to 81% of those in very large cities. Trends have been fairly parallel for all strata in all age bands. There have also been no consistent trend differences in current ***daily drinking*** associated with urbanicity in any of the three age bands.

- For ***occasions of heavy drinking***, all community-size strata have been fairly close across time at all three age levels, with two exceptions: The farm/country stratum has fairly consistently shown a slightly lower rate of binge drinking in the youngest two age bands, and such drinking has tended to be highest in the very large cities in the two upper age bands. However, in the upper two age bands, the differences among the communities of different sizes have gradually expanded since about 2001, when there were practically no differences. So, for example, in 2015 among 23- to 26-year-old respondents, 30% in the farm/country stratum indicated that they engaged in occasions of heavy drinking, versus 48% in the very large cities.

- ***Cigarette smoking*** has generally been negatively associated with population density in all three age strata, without much evidence of differential trends related to population density. There is one exception: Among 19- to 22-year-olds, all smoking prevalence measures rose from 1997 through 1999 in the farm/country and small town strata, while in most other strata they remained level. The differences in 1999 were most striking for half-pack-a-day smoking among the 19- to 22-year-olds—24% for farm/country, 19% for small town, 15% for both medium-sized and large cities, and 10% for very large cities. Compare this with 1985, when there was virtually no difference in half-pack-a-day smoking rates among these strata (all were at 18% or 19%). Thus, smoking among those in their early 20s

became more concentrated in the nonurban populations. In fact, among 19- to 22-year-olds, the farm/country stratum has usually had the highest rate of daily smoking since 1986, and the small town stratum has generally ranked second since then. As smoking has declined in all strata in the youngest group, this difference has diminished, though not so much in the older two age bands. Among the two older age groups, the farm/country stratum has been highest more often than not. Among 19- to 22-year-olds, there has been a decline in 30-day prevalence in most population density strata since about 2000 or 2001, and among 23- to 26-year-olds since 2005. Continuing declines in smoking among 12th graders lead us to predict still further declines among young adults as well, given the strength of cohort effects on smoking rates.

TABLE 5-1
Trends in Lifetime Prevalence of Various Types of Drugs among Respondents of Modal Ages 19–28

(Entries are percentages.)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Approximate Weighted N =	*6,900*	*6,800*	*6,700*	*6,600*	*6,700*	*6,600*	*6,800*	*6,700*	*6,500*	*6,400*	*6,300*	*6,400*	*6,200*	*6,000*	*5,700*	*5,800*	*5,300*	*5,300*	*5,700*	*5,400*	*5,100*	*4,800*	*4,900*	*4,900*	*4,900*	*4,600*	*4,600*	*4,400*	*4,200*	*4,000*	
Any Illicit Drug [a]	70.5	69.9	67.9	66.4	64.5	62.2	60.2	59.6	57.5	57.4	56.4	56.7	57.0	57.4	58.2	58.1	59.0	60.2	60.5	60.4	59.7	59.8	59.3	59.3	58.4	59.1	58.9	60.0	62.2	62.9	+0.7
Any Illicit Drug other than Marijuana [a]	48.4	47.0	44.6	42.7	40.8	37.8	37.0	34.6	33.4	32.8	31.0	30.5	29.9	30.2	31.3	31.6	32.8	33.9	35.2	34.0	34.8	34.2	34.7	32.8	33.3	33.2	32.8	34.0	37.3	36.8	-0.5
Marijuana	66.5	66.0	63.8	62.8	60.2	58.6	56.4	55.9	53.7	53.6	53.5	53.8	54.4	54.6	55.1	55.7	56.8	57.2	57.4	57.0	56.7	56.7	55.9	56.0	55.9	56.3	56.5	57.1	57.5	58.5	+1.0
Inhalants [b]	12.3	12.7	12.6	13.2	12.5	13.4	13.5	14.1	13.2	14.5	14.1	14.1	14.2	14.2	14.3	12.8	12.4	12.2	11.6	10.3	10.9	9.1	9.5	8.9	7.9	7.2	7.2	6.5	6.7	6.4	-0.3
Nitrites [c]	2.6	6.9	6.2	—	1.9	1.4	1.2	1.3	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hallucinogens [d,y]	18.5	17.1	17.0	15.9	16.1	15.7	15.7	15.4	15.4	16.1	16.4	16.7	17.4	18.0	18.4	18.3	19.6	19.7	19.3	17.6	17.2	16.0	14.8	14.2	13.9	13.0	12.2	12.4	11.9	11.7	-0.3
LSD [y]	14.6	13.7	13.8	12.7	13.5	13.5	13.8	13.6	13.8	14.5	15.0	15.0	15.7	16.2	16.4	16.0	15.1	14.6	13.4	11.2	10.1	9.6	8.1	7.3	7.2	6.1	6.2	6.3	6.6	7.0	+0.4
Hallucinogens other than LSD [d,y]	12.6	11.4	10.6	9.4	9.1	8.4	8.0	7.6	7.4	7.8	7.9	8.4	9.4	9.3	9.9	12.0	15.0	16.4	15.6	15.4	14.9	14.1	13.0	13.0	12.6	12.1	11.1	11.4	10.8	10.4	-0.4
PCP [e]	8.4	4.8	5.0	—	2.5	3.1	2.0	1.9	2.0	2.2	1.9	2.4	2.7	2.3	2.3	3.1	2.5	3.0	2.7	2.0	2.4	2.1	2.2	1.6	1.6	1.7	1.1	1.4	0.6	1.2	+0.6
Ecstasy (MDMA) [z], original	—	—	—	3.3	3.7	3.2	3.9	3.8	3.8	4.5	5.2	5.1	7.2	7.1	11.6	13.0	14.6	15.3	16.0	14.9	14.4	13.1	13.1	11.5	12.3	11.3	11.4	11.6	11.4	—	—
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12.5	12.9	+0.4
Cocaine	32.0	29.3	28.2	25.8	23.7	21.0	19.5	16.9	15.2	13.7	12.9	12.0	12.3	12.8	12.7	13.1	13.5	14.7	15.2	14.3	15.2	14.7	14.8	13.9	13.6	12.5	11.9	12.2	11.7	12.1	+0.4
Crack [g]	—	6.3	6.9	6.1	5.1	4.8	5.1	4.3	4.4	3.8	3.9	3.6	3.8	4.3	4.6	4.7	4.3	4.7	4.2	4.1	4.4	3.9	4.3	3.3	3.6	2.9	2.7	2.6	2.1	1.8	-0.3
Other Cocaine [h]	—	28.2	25.2	25.4	22.1	19.8	18.4	15.1	13.9	12.4	11.9	11.3	11.5	11.8	11.7	12.1	12.8	13.5	14.4	13.3	14.4	14.0	13.9	13.5	13.1	12.2	11.8	11.8	11.6	11.8	+0.3
Heroin	1.3	1.3	1.1	1.0	0.9	0.9	0.9	0.9	0.8	1.1	1.3	1.3	1.6	1.7	1.8	2.0	1.8	1.9	1.9	1.7	1.9	1.6	1.9	1.6	1.8	1.7	1.6	1.6	1.4	1.6	+0.1
With a Needle [i]	—	—	—	—	—	—	—	—	—	0.4	0.4	0.3	0.4	0.6	0.4	0.6	0.4	0.5	0.4	0.6	0.6	0.5	0.5	0.5	0.8	0.7	0.5	1.0	0.7	0.7	0.0
Without a Needle [i]	—	—	—	—	—	—	—	—	—	1.0	1.4	1.5	1.7	1.9	2.1	2.1	1.8	2.2	2.1	1.8	2.4	1.9	2.1	1.9	1.8	1.6	1.7	1.8	1.2	1.8	+0.6
Narcotics other than Heroin [j,k]	10.7	10.6	9.8	9.6	9.4	9.3	8.9	8.1	8.2	9.0	8.3	9.2	9.1	9.5	10.0	11.5	13.9	16.8	17.6	17.8	18.7	18.8	19.5	18.5	19.0	18.2	17.6	17.4	16.3	15.0	-1.3
Amphetamines, Adjusted [j,l]	32.3	30.8	28.8	25.3	24.4	22.4	20.2	18.7	17.1	16.6	15.3	14.6	14.3	14.1	15.0	15.0	14.8	15.2	15.9	14.6	15.6	15.3	14.6	14.9	16.1	16.5	17.4	18.8	18.7	18.8	+0.2
Methamphetamine [i]	—	—	—	—	—	—	—	—	—	—	—	—	—	8.8	9.3	9.0	9.1	8.9	9.0	8.3	7.3	6.7	6.3	4.7	4.3	3.2	3.5	3.1	2.3	2.4	+0.1
Crystal Methamphetamine (Ice) [i]	—	—	—	—	2.5	2.9	2.2	2.7	2.5	2.1	3.1	2.5	3.4	3.3	3.9	4.0	4.1	4.7	4.7	4.4	4.7	3.7	3.6	3.4	2.8	3.1	2.6	2.8	1.7	2.2	+0.5

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(Table continued on next page.)

TABLE 5-1 (cont.)
Trends in Lifetime Prevalence of Various Types of Drugs among Respondents of Modal Ages 19–28

Crystal Methamphetamine (Ice) [i]

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Approximate Weighted N =	*6,900*	*6,800*	*6,700*	*6,600*	*6,700*	*6,600*	*6,800*	*6,700*	*6,500*	*6,400*	*6,300*	*6,400*	*6,200*	*6,000*	*5,700*	*5,800*	*5,300*	*5,300*	*5,700*	*5,400*	*5,100*	*4,800*	*4,900*	*4,900*	*4,900*	*4,600*	*4,600*	*4,400*	*4,200*	*4,000*	
Sedatives (Barbiturates) [j,u]	11.1	9.7	8.9	7.9	8.7	8.2	7.4	6.5	6.4	6.7	6.6	6.5	6.9	7.4	8.1	7.8	8.0	8.7	9.7	10.0	9.5	9.8	10.6	9.5	8.6	7.9	7.2	9.5	9.0	8.3	-0.7
Sedatives, Adjusted [j,m]	16.7	15.0	13.2	12.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Methaqualone [j]	13.1	11.6	9.7	8.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tranquilizers [d,j]	17.6	16.5	15.1	13.5	12.9	11.8	11.3	10.5	9.9	9.7	9.3	8.6	9.6	9.6	10.5	11.9	13.4	13.8	14.9	14.5	15.0	14.5	15.8	13.8	14.3	13.8	13.3	13.2	12.5	12.8	+0.2
Alcohol [n]	94.8	94.9	94.8	94.5	94.3	94.1	93.4	92.1	91.2	91.6	91.2	90.7	90.6	90.2	90.7	89.9	90.2	89.3	89.4	89.1	88.9	87.9	88.4	87.9	87.5	87.4	86.5	86.2	86.3	85.7	-0.7
Been Drunk [o]	—	—	—	—	—	82.9	81.1	81.4	80.7	82.1	80.7	81.4	79.8	81.6	80.4	81.1	81.2	80.9	80.1	79.9	80.9	80.1	80.1	78.2	79.0	78.9	78.9	77.4	78.3	76.4	-1.9
Flavored Alcoholic Beverages [p]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	83.2	84.6	84.4	84.0	82.6	83.5	81.4	82.2	82.4	80.9	80.6	81.0	+0.5
Cigarettes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Steroids [q]	—	—	—	1.1	1.2	1.7	1.9	1.5	1.3	1.5	1.5	1.4	1.4	1.9	1.4	1.4	1.6	1.8	1.9	1.8	1.8	1.7	1.8	1.8	1.7	1.3	1.7	1.2	1.7	1.6	0.0

Source. The Monitoring the Future study, the University of Michigan.

See footnotes following Table 5-4.

TABLE 5-2
Trends in Annual Prevalence of Various Types of Drugs among Respondents of Modal Ages 19–28

(Entries are percentages.)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Approximate Weighted N =	*6,900*	*6,800*	*6,700*	*6,600*	*6,700*	*6,600*	*6,800*	*6,700*	*6,500*	*6,400*	*6,300*	*6,400*	*6,200*	*6,000*	*5,700*	*5,800*	*5,300*	*5,300*	*5,700*	*5,400*	*5,100*	*4,800*	*4,900*	*4,900*	*4,900*	*4,600*	*4,600*	*4,400*	*4,200*	*4,000*	
Any Illicit Drug [a]	41.9	39.3	36.3	32.8	30.7	27.0	28.3	28.4	28.4	29.8	29.2	29.2	29.9	30.3	30.8	32.1	32.4	33.0	33.7	32.8	32.1	32.5	33.8	33.3	33.2	34.7	34.0	36.7	37.5	39.2	+1.7
Any Illicit Drug other than Marijuana [a]	27.0	23.9	21.3	18.3	16.7	14.3	14.1	13.0	13.0	13.8	13.2	13.6	13.2	13.7	14.9	15.4	16.3	18.1	18.8	18.5	18.4	18.1	18.9	17.4	18.5	17.6	17.2	18.1	21.2	19.5	-1.6
Marijuana	36.5	34.8	31.8	29.0	26.1	23.8	25.2	25.1	25.5	26.5	27.0	26.8	27.4	27.6	27.9	29.2	29.3	29.0	29.2	28.2	27.7	28.5	28.6	29.3	28.7	31.0	30.2	32.2	31.6	34.0	+2.4 s
Synthetic Marijuana [v]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.4	5.3	3.2	1.3	1.5	+0.2
Inhalants [b]	1.9	2.1	1.8	1.9	1.9	2.0	1.9	2.1	2.1	2.4	2.2	2.3	2.1	2.3	2.1	1.7	1.6	1.4	1.7	1.3	1.3	0.8	1.4	0.9	1.2	0.8	1.1	0.5	1.1	0.9	-0.2
Nitrites [c]	2.0	1.3	1.0	—	0.4	0.2	0.1	0.4	0.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hallucinogens [d,y]	4.5	4.0	3.9	3.6	4.1	4.5	5.0	4.5	4.8	5.6	5.6	5.8	5.2	5.4	5.4	5.4	4.7	5.2	4.7	4.5	4.1	3.8	3.8	3.9	4.2	3.7	3.6	3.9	4.1	4.2	+0.1
LSD [y]	3.0	2.9	2.9	2.7	3.3	3.8	4.3	3.8	4.0	4.6	4.5	4.4	3.5	4.0	3.7	3.4	1.8	1.2	0.9	0.8	1.2	1.1	1.4	1.7	1.5	1.7	1.6	2.0	2.2	2.6	+0.4
Hallucinogens other than LSD [d,y]	2.5	2.1	1.9	1.8	1.7	1.7	1.9	1.9	2.0	2.5	2.8	3.1	3.0	3.0	3.4	3.5	4.0	4.9	4.5	4.2	3.8	3.6	3.4	3.3	3.7	3.2	2.9	3.2	3.1	3.0	-0.1
PCP [e]	0.8	0.4	0.4	—	0.2	0.3	0.3	0.2	0.3	0.3	0.2	0.5	0.6	0.6	0.3	0.6	0.3	0.3	0.1	0.6	0.2	0.3	0.4	0.1	0.2	0.3	0.0	0.2	0.1	*	-0.1
Ecstasy (MDMA) [z], original	—	—	—	1.4	1.5	0.8	1.0	0.8	0.7	1.6	1.7	2.1	2.9	3.6	7.2	7.5	6.2	4.5	3.5	3.0	3.0	2.5	3.3	3.1	3.5	3.6	4.1	4.2	4.8	—	—
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.1	4.4	-0.7
Salvia [w]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.5	3.6	2.2	1.4	0.9	1.2	0.6	-0.6 s
Cocaine	19.7	15.7	13.8	10.8	8.6	6.2	5.7	4.7	4.3	4.4	4.1	4.6	4.9	5.4	5.4	5.8	5.8	6.6	7.1	6.9	6.6	6.2	6.0	5.2	4.7	4.7	4.1	3.9	5.0	5.7	+0.7
Crack [g]	3.2	3.1	3.1	2.5	1.6	1.2	1.4	1.3	1.1	1.1	1.1	1.0	1.1	1.4	1.2	1.3	1.0	1.0	1.3	1.2	1.1	1.0	0.9	0.7	0.5	0.6	0.5	0.3	0.4	0.4	0.0
Other Cocaine [h]	—	13.6	11.9	10.3	8.1	5.4	5.1	3.9	3.6	3.9	3.8	4.3	4.5	4.8	4.8	5.3	5.6	6.1	6.4	6.3	5.9	5.6	5.5	5.0	4.8	4.3	4.0	1.0	4.8	5.4	+0.6
Heroin	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.4	0.4	0.3	0.4	0.4	0.4	0.5	0.2	0.4	0.3	0.4	0.4	0.3	0.5	0.6	0.5	0.5	0.5	0.6	0.4	0.5	+0.1
With a Needle [i]	—	—	—	—	—	—	—	—	—	0.1	0.1	0.1	0.1	0.1	*	0.3	*	*	0.1	0.2	0.3	0.1	0.1	0.1	0.2	0.4	0.3	0.3	0.2	0.2	0.0
Without a Needle [i]	—	—	—	—	—	—	—	—	—	0.3	0.4	0.4	0.6	0.6	0.5	0.9	0.2	0.4	0.3	0.4	0.5	0.3	0.4	0.6	0.4	0.2	0.4	0.7	0.3	0.5	+0.1
Narcotics other than Heroin [j,k]	3.1	3.1	2.7	2.8	2.7	2.5	2.5	2.2	2.5	3.0	2.9	3.3	3.4	3.8	4.1	5.0	7.1	8.5	9.0	8.7	9.1	8.7	9.1	8.4	9.0	7.9	7.3	7.0	6.3	5.2	-1.1 s
OxyContin [j,r]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.9	2.6	3.1	3.1	3.1	2.9	3.9	5.2	3.2	2.8	2.3	2.8	2.5	2.5	0.0
Vicodin [j,r]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.2	8.6	8.9	9.3	9.1	8.9	9.1	8.9	7.8	7.1	6.3	6.2	4.8	3.8	-1.1
Amphetamines, Adjusted [j,l]	10.6	8.7	7.3	5.8	5.2	4.3	4.1	4.0	4.5	4.6	4.2	4.6	4.5	4.7	5.4	5.8	5.9	5.8	6.2	5.1	5.6	5.6	5.3	6.0	7.1	7.2	7.8	7.5	8.0	7.9	-0.2
Ritalin [j,r]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.9	2.9	2.7	2.5	2.6	2.4	2.4	1.7	1.7	1.5	1.6	2.0	1.6	1.8	+0.2
Adderall [j,r]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.8	7.0	6.6	7.4	7.0	7.8	7.7	-0.1
Provigil [j,r]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	0.5	0.3	—	—	—	—	—
Methamphetamine [i]	—	—	—	—	—	—	—	—	—	—	—	—	—	2.8	2.5	2.8	2.5	2.7	2.8	2.4	1.9	1.5	1.0	0.9	0.7	0.5	1.0	0.6	0.5	0.7	+0.1
Crystal Methamphetamine (Ice) [i]	—	—	—	—	0.4	0.3	0.4	0.8	0.9	1.2	0.9	0.9	1.1	0.9	1.2	1.1	1.4	1.3	1.5	1.6	1.1	1.1	0.8	0.8	0.5	0.5	0.6	0.8	0.3	0.5	+0.2

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(List of drugs continued.)

(Table continued on next page.)

TABLE 5-2 (cont.)
Trends in Annual Prevalence of Various Types of Drugs among Respondents of Modal Ages 19–28

(Entries are percentages.)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Approximate Weighted N =	*6,900*	*6,800*	*6,700*	*6,600*	*6,700*	*6,600*	*6,800*	*6,700*	*6,500*	*6,400*	*6,300*	*6,400*	*6,200*	*6,000*	*5,700*	*5,800*	*5,300*	*5,300*	*5,700*	*5,400*	*5,100*	*4,800*	*4,900*	*4,900*	*4,900*	*4,600*	*4,600*	*4,400*	*4,200*	*4,000*	
Bath Salts (synthetic stimulants) [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	0.4	0.4	0.3	-0.1
Sedatives (Barbiturates) [j,u]	2.3	2.1	1.8	1.7	1.9	1.8	1.6	1.9	1.8	2.1	2.2	2.4	2.5	2.8	3.4	3.7	3.9	3.9	4.4	4.2	3.9	4.2	4.7	3.8	3.3	3.2	2.7	3.4	3.2	2.7	-0.5
Sedatives, Adjusted [j,m]	3.0	2.5	2.1	1.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Methaqualone [j]	1.3	0.9	0.5	0.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tranquilizers [d,j]	5.4	5.1	4.2	3.7	3.7	3.5	3.4	3.1	2.9	3.4	3.2	3.1	3.8	3.7	4.6	5.5	7.0	6.8	7.4	6.7	6.5	7.1	6.8	6.4	6.3	5.9	5.3	5.4	4.8	5.0	+0.3
Rohypnol [i]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.3	0.5	0.1	0.1	0.2	0.3	0.2	0.1	—	—	—	—	—	—	—
GHB [x]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.8	0.6	0.5	0.3	0.2	0.4	0.3	0.2	0.3	0.3	0.4	0.3	0.3	0.2	-0.1
Ketamine [x]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.2	0.9	0.6	0.5	0.5	0.3	0.4	0.5	0.8	0.5	0.8	0.5	0.4	0.7	+0.2
Alcohol [n]	88.6	89.4	88.6	88.1	87.4	86.9	86.2	85.3	83.7	84.7	84.0	84.3	84.0	84.1	84.0	84.3	84.9	83.3	84.4	83.8	84.4	84.0	83.6	83.8	82.7	83.5	82.5	82.5	82.3	81.2	-1.1
Been Drunk [o]	—	—	—	—	—	62.0	60.9	61.1	58.8	61.6	59.9	63.2	59.6	63.2	60.6	63.1	61.8	62.9	63.8	63.5	65.7	65.8	66.0	65.5	64.8	64.0	64.6	63.1	63.5	61.2	-2.4
Flavored Alcoholic Beverages [p]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	62.7	58.4	58.5	58.9	58.3	57.0	52.0	56.3	54.8	54.1	55.4	57.3	+1.9
Alcoholic Beverages containing Caffeine [l,t]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	28.1	36.7	36.9	35.0	33.5	-1.5
Cigarettes	40.1	40.3	37.7	38.0	37.1	37.7	37.9	37.8	38.3	38.8	40.3	41.8	41.6	41.1	40.9	41.1	39.1	38.6	39.0	39.1	36.9	36.2	35.0	33.9	33.0	31.5	29.8	29.8	27.0	26.2	-0.8
Small Cigars [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19.2	18.0	18.4	18.6	17.9	-0.7
Tobacco using a Hookah [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20.1	19.1	20.4	23.3	19.2	-4.0 ss
Dissolvable Tobacco [i]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.3	0.6	0.3	0.5	0.4	-0.1
Snus [i]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.1	5.7	4.8	4.8	4.8	0.0
Steroids [q]	—	—	—	0.5	0.3	0.5	0.4	0.3	0.4	0.5	0.3	0.5	0.4	0.6	0.4	0.4	0.4	0.5	0.5	0.5	0.3	0.7	0.4	0.7	0.8	0.2	0.4	0.5	0.7	0.5	-0.2

Source. The Monitoring the Future study, the University of Michigan.

See footnotes following Table 5-4.

TABLE 5-3
Trends in 30-Day Prevalence of Various Types of Drugs among Respondents of Modal Ages 19–28

(Entries are percentages.)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Approximate Weighted N =	*6,900*	*6,800*	*6,700*	*6,600*	*6,700*	*6,600*	*6,800*	*6,700*	*6,500*	*6,400*	*6,300*	*6,400*	*6,200*	*6,000*	*5,700*	*5,800*	*5,300*	*5,300*	*5,700*	*5,400*	*5,100*	*4,800*	*4,900*	*4,900*	*4,900*	*4,600*	*4,600*	*4,400*	*4,200*	*4,000*	
Any Illicit Drug [a]	25.8	23.4	20.5	17.7	15.9	15.1	14.8	14.9	15.3	15.8	15.8	16.4	16.1	17.1	18.1	18.8	18.9	19.9	19.1	18.6	18.5	18.9	19.3	19.8	18.9	20.6	19.9	21.6	22.3	23.2	+0.9
Any Illicit Drug other than Marijuana [a]	13.0	10.7	9.5	7.5	6.0	5.4	5.5	4.9	5.3	5.7	4.7	5.5	5.5	6.0	6.4	7.0	7.7	8.3	8.5	8.2	8.1	8.6	8.9	8.5	8.6	8.4	7.8	8.3	9.9	8.7	-1.3
Marijuana	22.0	20.7	17.9	15.5	13.9	13.5	13.3	13.4	14.1	14.0	15.1	15.0	14.9	15.6	16.1	16.7	16.9	17.3	16.5	15.8	15.7	16.0	16.0	17.0	16.1	18.3	17.7	19.0	19.2	20.1	+0.9
Inhalants [b]	0.4	0.6	0.6	0.5	0.6	0.5	0.6	0.7	0.5	0.7	0.5	0.5	0.7	0.8	0.5	0.4	0.5	0.3	0.3	0.2	0.3	0.2	0.4	0.2	0.1	0.1	0.3	0.1	0.3	0.2	-0.1
Nitrites [c]	0.5	0.5	0.4	—	0.1	*	0.1	0.2	0.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hallucinogens [d,y]	1.3	1.2	1.1	1.1	0.9	1.1	1.5	1.2	1.4	1.7	1.2	1.5	1.4	1.3	1.2	1.2	0.9	1.2	0.9	0.8	0.7	0.9	0.9	0.8	1.0	0.9	0.6	1.0	0.9	1.1	+0.1
LSD [y]	0.9	0.8	0.8	0.8	0.6	0.8	1.1	0.8	1.1	1.3	0.7	0.9	1.0	0.8	0.8	0.7	0.3	0.2	0.1	0.1	0.2	0.2	0.4	0.2	0.4	0.3	0.3	0.4	0.4	0.7	+0.3
Hallucinogens other than LSD [d,y]	0.6	0.6	0.4	0.5	0.4	0.3	0.5	0.6	0.6	0.6	0.6	0.7	0.5	0.6	0.7	0.6	0.8	1.2	0.9	0.8	0.6	0.8	0.7	0.7	0.8	0.6	0.4	0.7	0.6	0.5	-0.1
PCP [e]	0.2	0.1	0.3	—	0.2	0.1	0.2	0.2	0.1	*	0.1	0.1	0.2	0.2	*	*	0.1	0.1	0.1	*	*	*	0.1	*	*	0.1	*	0.2	0.1	*	-0.1
Ecstasy (MDMA) [z], original	—	—	—	0.4	0.2	0.1	0.3	0.3	0.2	0.4	0.3	0.6	0.8	1.3	1.9	1.8	1.3	0.8	0.6	0.6	0.7	0.5	0.6	0.6	0.8	0.7	1.0	1.1	1.3	—	—
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.4	0.8	-0.6
Cocaine	8.2	6.0	5.7	3.8	2.4	2.0	1.8	1.4	1.3	1.5	1.2	1.5	1.7	1.9	1.7	2.2	2.2	2.4	2.2	2.2	2.3	2.1	1.9	1.8	1.4	1.5	1.3	1.5	1.8	1.7	0.0
Crack [g]	—	1.0	1.2	0.7	0.4	0.4	0.4	0.4	0.3	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.0
Other Cocaine [h]	—	4.8	4.8	3.4	2.1	1.8	1.7	1.1	1.0	1.3	1.1	1.5	1.5	1.6	1.5	1.8	2.0	2.1	2.1	1.9	1.9	2.0	1.7	1.6	1.5	1.4	1.3	1.3	1.8	1.6	-0.2
Heroin	0.1	0.1	0.1	0.1	0.1	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	*	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.3	0.2	0.3	+0.1
Narcotics other than Heroin [j,k]	0.9	0.9	0.7	0.7	0.7	0.6	0.7	0.7	0.6	0.9	0.7	0.9	0.9	1.2	1.4	1.7	2.9	2.9	3.0	3.5	3.2	3.4	3.6	3.2	3.4	2.9	2.7	1.0	2.1	1.8	-0.3
Amphetamines, Adjusted [j,l]	4.0	3.2	2.7	2.1	1.9	1.5	1.5	1.5	1.7	1.7	1.5	1.7	1.7	1.9	2.3	2.4	2.5	2.5	2.4	2.1	2.2	2.3	2.2	2.5	2.9	3.0	3.2	3.0	3.5	3.1	-0.4
Methamphetamine [i]	—	—	—	—	—	—	—	—	—	—	—	—	—	0.8	0.7	1.0	1.0	0.7	0.6	0.7	0.5	0.6	0.3	0.3	0.2	0.3	0.4	0.2	0.3	0.3	0.0
Crystal Methamphetamine (Ice) [i]	—	—	—	—	—	*	0.1	0.3	0.5	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.4	0.6	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.4	0.1	0.3	+0.2

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(Table continued on next page.)

TABLE 5-3 (cont.)
Trends in 30-Day Prevalence of Various Types of Drugs among Respondents of Modal Ages 19–28

(Entries are percentages.)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Approximate Weighted N =	*6,900*	*6,800*	*6,700*	*6,600*	*6,700*	*6,600*	*6,800*	*6,700*	*6,500*	*6,400*	*6,300*	*6,400*	*6,200*	*6,000*	*5,700*	*5,800*	*5,300*	*5,300*	*5,700*	*5,400*	*5,100*	*4,800*	*4,900*	*4,900*	*4,900*	*4,600*	*4,600*	*4,400*	*4,200*	*4,000*	
Sedatives (Barbiturates) [j,u]	0.7	0.7	0.7	0.5	0.6	0.5	0.5	0.6	0.6	0.8	0.8	0.9	0.9	1.1	1.3	1.7	1.5	1.5	1.8	1.7	1.5	1.6	1.9	1.2	1.1	1.1	1.1	1.2	1.0	0.9	-0.1
Sedatives, Adjusted [j,m]	0.9	0.8	0.7	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Methaqualone [j]	0.3	0.2	0.1	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tranquilizers [d,j]	1.8	1.6	1.4	1.2	1.1	0.9	1.0	1.0	0.8	1.1	0.7	1.1	1.2	1.3	1.8	2.1	2.8	2.4	2.7	2.6	2.3	2.8	2.7	2.8	2.2	2.3	1.9	1.9	1.9	1.7	-0.2
Alcohol [n]	75.1	75.4	74.0	72.4	71.2	70.6	69.0	68.3	67.7	68.1	66.7	67.5	66.9	68.2	66.8	67.2	68.3	67.0	68.4	68.6	68.7	69.5	68.9	69.4	68.4	68.8	69.5	68.7	68.4	66.9	-1.5
Been Drunk [o]	—	—	—	—	—	35.4	35.6	34.2	34.3	33.0	33.2	35.6	34.2	37.7	35.7	36.8	37.1	37.8	39.0	39.0	42.1	41.4	40.7	40.5	39.4	39.5	39.1	37.7	39.3	34.2	-5.1 sss
Flavored Alcoholic Beverage [p]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	29.5	27.6	24.9	25.9	26.7	24.4	24.5	23.8	26.1	25.4	26.9	24.7	-2.2
Cigarettes	31.1	30.9	28.9	28.6	27.7	28.2	28.3	28.0	28.0	29.2	30.1	29.9	30.9	30.3	30.1	30.2	29.2	28.4	29.2	28.6	27.0	26.2	24.6	23.3	22.4	21.3	19.7	20.0	17.5	16.6	-0.9
Steroids [q]	—	—	—	0.2	0.1	0.2	0.1	*	0.1	0.2	0.2	0.2	0.2	0.3	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.4	0.2	0.3	0.5	0.2	0.1	0.1	0.3	0.1	-0.2

Source. The Monitoring the Future study, the University of Michigan.

See footnotes following Table 5-4.

TABLE 5-4
Trends in 30-Day Prevalence of Daily Use of Various Types of Drugs among Respondents of Modal Ages 19–28

(Entries are percentages.)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Approximate Weighted N =	*6,900*	*6,800*	*6,700*	*6,600*	*6,700*	*6,600*	*6,800*	*6,700*	*6,500*	*6,400*	*6,300*	*6,400*	*6,200*	*6,000*	*5,700*	*5,800*	*5,300*	*5,300*	*5,700*	*5,400*	*5,100*	*4,800*	*4,900*	*4,900*	*4,900*	*4,600*	*4,600*	*4,400*	*4,200*	*4,000*	
Marijuana [s]	4.1	4.2	3.3	3.2	2.5	2.3	2.3	2.4	2.8	3.3	3.3	3.8	3.7	4.4	4.2	5.0	4.5	5.3	5.0	4.9	5.0	5.0	5.1	5.4	5.3	6.1	5.6	6.2	6.9	6.8	-0.2
Any Illicit Drug	0.2	0.1	0.2	0.1	*	0.1	*	0.1	*	0.1	*	*	*	0.1	*	0.1	*	*	0.1	0.1	0.1	*	*	0.1	*	*	*	*	0.1	*	0.0
other than Marijuana [a]	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.3	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.2	0.1	0.0
Alcohol																															
Daily [n,s]	6.1	6.6	6.1	5.5	4.7	4.9	4.5	4.5	3.9	3.9	4.0	4.6	4.0	4.8	4.1	4.4	4.7	5.1	4.5	5.2	5.4	5.6	5.3	5.3	4.6	5.2	5.5	5.1	5.0	4.7	-0.3
Been Drunk [o,s]	—	—	—	—	—	0.5	0.4	0.4	0.5	0.3	0.4	0.9	0.5	0.9	0.5	0.4	0.6	0.8	0.7	0.5	0.6	0.6	0.5	1.0	0.7	0.7	0.4	0.5	0.6	0.4	-0.2
5+ Drinks in a Row in Last 2 Weeks	36.1	36.2	35.2	34.8	34.3	34.7	34.2	34.4	33.7	32.6	33.6	34.4	34.1	35.8	34.7	35.9	35.9	35.8	37.1	37.0	37.6	37.8	37.9	36.7	35.9	36.5	35.5	35.1	33.5	31.9	-1.6
Cigarettes																															
Daily	25.2	24.8	22.7	22.4	21.3	21.7	20.9	20.8	20.7	21.2	21.8	20.6	21.9	21.5	21.8	21.2	21.2	20.3	20.8	19.6	18.6	17.3	16.7	15.0	14.8	13.8	12.8	12.1	10.7	9.7	-1.1
1/2 Pack+/Day	20.2	19.8	17.7	17.3	16.7	16.0	15.7	15.5	15.3	15.7	15.3	14.6	15.6	15.1	15.1	14.6	14.2	13.9	13.5	12.5	11.9	11.1	10.2	9.3	9.3	7.5	7.6	7.0	6.6	5.7	-0.9

Source. The Monitoring the Future study, the University of Michigan.

See footnotes on the following page.

Footnotes for Tables 5-1 through 5-4

Notes. Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001.
Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.
The illicit drugs not listed here show a daily prevalence of 0.2% or less in all years.
' * ' indicates a prevalence rate of less than 0.05%.
' — ' indicates data not available.

[a]Use of any illicit drug includes any use of marijuana, hallucinogens, cocaine, heroin or other narcotics, amphetamines, sedatives (barbiturates), methaqualone (until 1990), or tranquilizers not under a doctor's orders.

[b]This drug was asked about in four of the five questionnaire forms in 1986–1989; *N* is four fifths of *N* indicated. Data were based on five of the six questionnaire forms in 1990–1998; *N* is five sixths of *N* indicated. Data were based on three of six questionnaire forms in 1999–2014; *N* is three sixths of *N* indicated.

[c]This drug was asked about in one questionnaire form. *N* is one fifth of *N* indicated in 1986–1988 and one sixth of *N* indicated in 1990–1994.

[d]In 2001 the question text was changed on three of the six questionnaire forms. Other psychedelics was changed to other hallucinogens, and shrooms was added to the list of examples. For tranquilizers, Miltown was replaced with Xanax. Beginning in 2002 the remaining forms were changed to the new wording.

[e]This drug was asked about in one of the five questionnaire forms in 1986–1988; *N* is one fifth of *N* indicated. Data were based on one of six questionnaire forms in 1990–2014; *N* is one sixth of *N* indicated.

[f]This drug was asked about in two of the five questionnnaire forms in 1989; *N* is two fifths of *N* indicated. Data were based on two of the six questionnaire forms in 1990–2001; *N* is two sixths of *N* indicated. Data were based on three of the six questionnaire forms in 2002–2014; *N* is three sixths of *N* indicated.

[g]This drug was asked about in two of the five questionnaire forms in 1987–1989; *N* is two fifths of *N* indicated. Data were based on all six questionnaire forms in 1990–2001. Data were based on five of six questionnaire forms in 2002–2014; *N* is five sixths of *N* indicated.

[h]This drug was asked about in one of the five questionnaire forms in 1987–1989; *N* is one fifth of *N* indicated. Data were based on four of the six questionnaire forms in 1990–2014; *N* is four sixths of *N* indicated.

[i]This drug was asked about in two of the six questionnaire forms; *N* is two sixths of *N* indicated.

[j]Only drug use that was not under a doctor's orders is included here.

[k]In 2002 the question text was changed in three of the six questionnaire forms. The list of examples of narcotics other than heroin was updated: Talwin, laudanum, and paregoric—all of which had negligible rates of use by 2001—were replaced by Vicodin, OxyContin, and Percocet. The 2002 data presented here are based on the changed forms only; *N* is three sixths of *N* indicated. In 2003 the remaining forms were changed to the new wording. The data are based on all forms in 2003 and beyond.

[l]Based on the data from the revised question, which attempts to exclude the inappropriate reporting of nonprescription amphetamines.

[m]Sedatives, adjusted" data are a combination of barbiturate and methaqualone data.

[n]In 1993 and 1994, the question text was changed slightly in three of the six questionnaire forms to indicate that a drink meant more than just a few sips. Because this revision resulted in rather little change in reported prevalence in the surveys of high school graduates, the data for all forms combined are used in order to provide the most reliable estimate of change. After 1994 the new question text was used in all six of the questionnaire forms.

[o]This drug was asked about in three of the six questionnaire forms; *N* is three sixths of *N* indicated. For small cigars only, beginning in 2014 question asked on two of the six questionnaire forms; N is two sixths of N indicated.

[p]This drug was asked about in one of the six questionnaire forms; *N* is one sixth of *N* indicated.

[q]This drug was asked about in one of the five questionnaire forms in 1989; *N* is one fifth of *N* indicated. Data were based on two of the six questionnaire forms in 1990–2014; N is two sixths of *N* indicated.

[r]This drug was asked about in two of the six questionnaire forms in 2002–2009; *N* is two sixths of *N* indicated. Data were based on three of the six questionnaire forms in 2010-2014. N is three sixths of N indicated.

[s]Daily use is defined as use on 20 or more occasions in the past 30 days except for cigarettes, measured as actual daily use, and 5+ drinks, measured as having five or more drinks in a row in the last two weeks.

[t]In 2012 the alcoholic beverage containing caffeine question text was changed to alcoholic beverage mixed with an energy drink. The data in 2011 and 2012 are not comparable due to this question change.

[u]In 2013 the question text was changed on all forms: Tuinal, Nembutal, and Seconal were replaced with Ambien, Lunesta, and Sonata. The data in 2012 and 2013 are not comparable due to this question change.

[v]This drug was asked about in two of the six questionnaire forms in 2011-2012; N is two sixths of N indicated. Data were based on three of the six questionaire forms in 2013-2014; N is three sixths of N indicated.

[w]This drug was asked about in one of the six questionnaire forms in 2009; N is one sixth of N indicated; Data were based on two of the six questionnaire forms in 2010-2011; N is two sixths of N indicated. Data were based on three of the six questionnaire forms in 2012-2014; N is three sixths of N indicated.

[x]This drug was asked about in two of the six questionnaire forms in 2002-2009; N is two sixths of N indicated; Data were based on three of the six questionnaire forms in 2010-2011; N is three sixths of N indicated. Data were based on two of the six questionnaire forms in 2012-2014; N is two sixths of N indicated.

[y]This drug was asked about in all available questionnaire forms until 2014. Beginning in 2014, data are based on five of the six questionnaire forms; N is five sixths of N indicated.

[z]This drug was asked about in two of the five questionnnaire forms in 1989; *N* is two fifths of *N* indicated. Data were based on two of the six questionnaire forms in 1990–2001; *N* is two sixths of *N* indicated. Data were based on three of the six questionnaire forms in 2002–2013; *N* is three sixths of *N* indicated. In 2014, a version of the question was added to an additional form that included "molly" in the description. In 2015 the remaining forms were changed to this updated wording. Data for both versions of the question are included here. Beginning in 2015, data based on four of th six questionnaire forms. *N* is four sixths of *N* indicated.

TABLE 5-5
Trends in Annual and 30-Day Prevalence of an Illicit Drug Use Index [a]
among Respondents of Modal Ages 19–28
Total and by Gender

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
	Percentage who used in last 12 months																														
Any Illicit Drug																															
Total	41.9	39.3	36.3	32.8	30.7	27.0	28.3	28.4	28.4	29.8	29.2	29.2	29.9	30.3	30.8	32.1	32.4	33.0	33.7	32.8	32.1	32.5	33.8	33.3	33.2	34.7	34.0	36.7	37.5	39.2	+1.7
Males	45.3	42.6	39.5	35.7	33.6	30.0	31.4	31.1	32.3	32.1	31.6	31.9	33.6	33.9	34.4	34.9	35.6	36.0	37.0	35.3	35.9	35.4	37.4	35.3	38.1	38.3	37.7	38.4	40.6	42.9	+2.2
Females	39.0	36.5	33.6	30.5	28.3	24.5	25.8	26.1	25.3	28.1	27.3	27.1	27.1	27.6	28.2	30.1	30.2	31.0	31.4	31.1	29.5	30.7	31.4	32.0	29.9	32.4	31.5	35.4	35.3	36.7	+1.4
Any Illicit Drug other than Marijuana																															
Total	27.0	23.9	21.3	18.3	16.7	14.3	14.1	13.0	13.0	13.8	13.2	13.6	13.2	13.7	14.9	15.4	16.3	18.1	18.8	18.5	18.4	18.1	18.9	17.4	18.5	17.6	17.2	18.1	21.2	19.5	-1.6
Males	30.4	26.5	23.8	21.0	19.1	16.4	16.3	14.7	16.2	16.2	15.4	15.6	16.2	16.7	17.8	17.2	18.9	19.8	21.3	20.4	21.8	20.3	21.1	18.7	21.5	19.9	19.5	19.7	23.7	22.9	-0.7
Females	24.0	21.6	19.4	16.2	14.7	12.5	12.2	11.6	10.5	12.0	11.4	12.0	11.0	11.5	12.9	14.1	14.6	17.0	17.1	17.3	16.0	16.7	17.5	16.6	16.5	16.2	15.7	17.1	19.4	17.2	-2.2
	Percentage who used in past 30 days																														
Any Illicit Drug																															
Total	25.8	23.4	20.5	17.7	15.9	15.1	14.8	14.9	15.3	15.8	15.8	16.4	16.1	17.1	18.1	18.8	18.9	19.9	19.1	18.6	18.5	18.9	19.3	19.8	18.9	20.6	19.9	21.6	22.3	23.2	+0.9
Males	29.9	27.1	23.7	21.1	18.8	18.3	17.9	17.4	19.5	18.6	19.0	19.8	20.1	20.0	21.5	21.9	22.8	22.4	23.1	22.0	22.5	22.7	22.8	22.4	23.9	24.5	23.8	25.4	24.7	26.9	+2.2
Females	22.2	20.2	17.8	15.0	13.5	12.5	12.4	12.9	12.1	13.5	13.3	13.8	13.2	15.0	15.6	16.6	16.3	18.3	16.3	16.4	15.7	16.4	16.9	18.0	15.5	18.2	17.3	18.9	20.6	20.8	+0.2
Any Illicit Drug other than Marijuana																												1.0			
Total	13.0	10.7	9.5	7.5	6.0	5.4	5.5	4.9	5.3	5.7	4.7	5.5	5.5	6.0	6.4	7.0	7.7	8.3	8.5	8.2	8.1	8.6	8.9	8.5	8.6	8.4	7.8	8.3	9.9	8.7	-1.3
Males	15.2	12.3	10.6	9.1	6.8	6.6	6.5	5.9	7.1	6.8	5.7	6.8	7.1	7.3	7.8	8.1	8.5	9.2	10.6	9.2	10.2	10.0	10.0	8.5	10.0	10.0	9.0	9.4	11.4	10.7	-0.7
Females	11.0	9.4	8.7	6.2	5.3	4.4	4.7	4.0	3.9	4.8	4.0	4.5	4.4	5.1	5.4	6.3	7.1	7.7	7.1	7.6	6.8	7.7	8.1	8.5	7.6	7.5	7.0	7.5	9.0	7.3	-1.6
	Approximate Weighted N																														
All Respondents																															
Total	*6,900*	*6,800*	*6,700*	*6,600*	*6,700*	*6,600*	*6,800*	*6,700*	*6,500*	*6,400*	*6,300*	*6,400*	*6,200*	*6,000*	*5,700*	*5,800*	*5,300*	*5,300*	*5,700*	*5,400*	*5,100*	*4,800*	*4,900*	*4,900*	*4,900*	*4,600*	*4,600*	*4,400*	*4,200*	*4,000*	
Males	*3,200*	*3,100*	*3,000*	*2,900*	*3,000*	*3,000*	*3,000*	*3,000*	*2,900*	*2,800*	*2,700*	*2,800*	*2,700*	*2,600*	*2,400*	*2,400*	*2,200*	*2,200*	*2,300*	*2,200*	*2,100*	*1,900*	*2,000*	*2,000*	*2,000*	*1,800*	*1,900*	*900*	*1,700*	*1,600*	
Females	*3,700*	*3,700*	*3,700*	*3,700*	*3,700*	*3,600*	*3,700*	*3,700*	*3,600*	*3,600*	*3,600*	*3,600*	*3,500*	*3,400*	*3,300*	*3,400*	*3,100*	*3,100*	*3,400*	*3,200*	*3,000*	*2,900*	*2,900*	*2,900*	*2,900*	*2,800*	*2,700*	*1,300*	*2,500*	*2,400*	

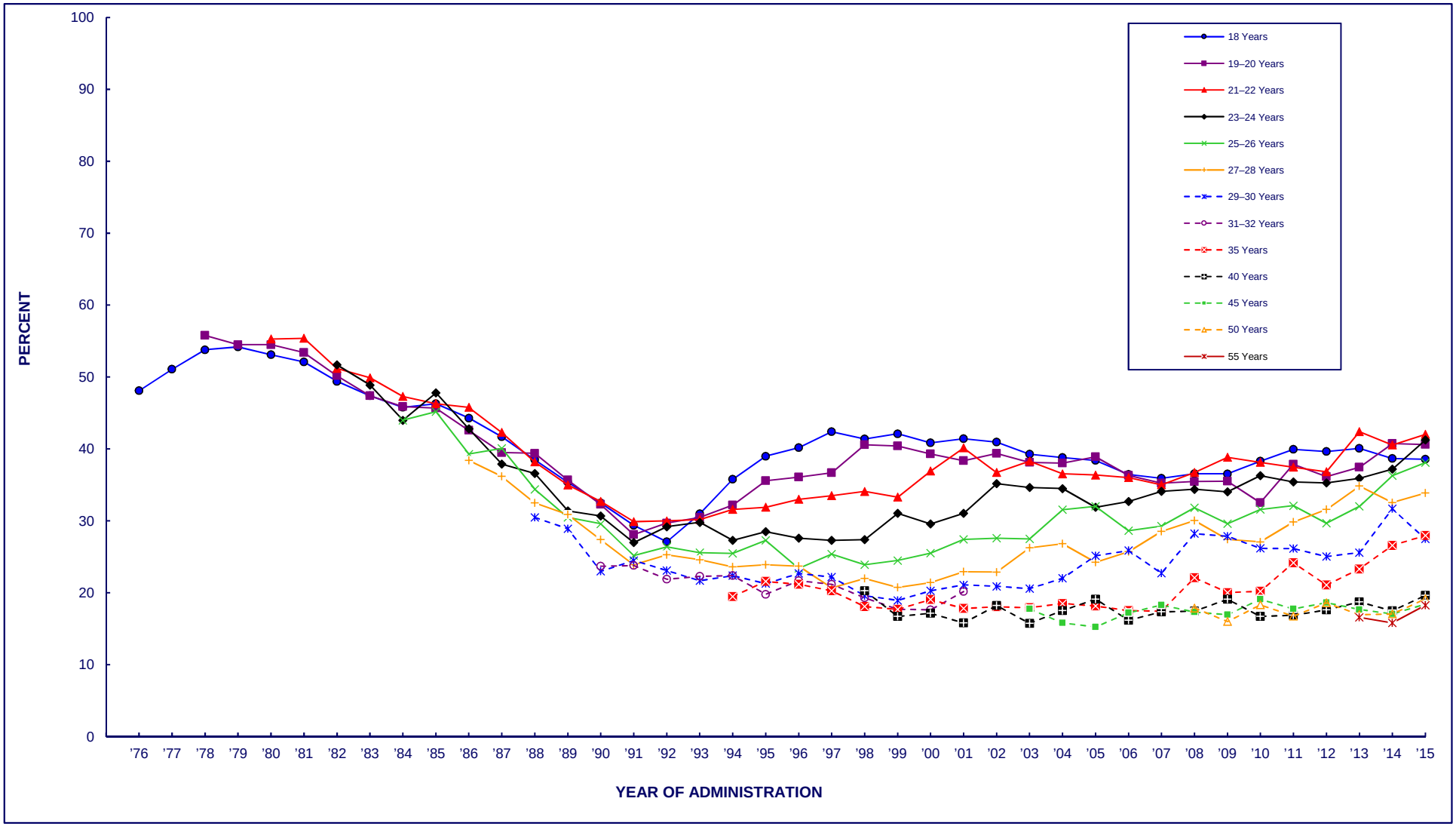
Source. The Monitoring the Future study, the University of Michigan.

Notes. Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001.

Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

[a]Use of any illicit drug includes any use of marijuana, hallucinogens, cocaine, heroin or other narcotics, amphetamines, sedatives (barbiturates), methaqualone (until 1990), or tranquilizers not under a doctor's orders.

FIGURE 5-1
ANY ILLICIT DRUG
Trends in Annual Prevalence
among Respondents of Modal Ages 18 through 55, by Age Group



(Figure continued on next page.)

FIGURE 5-1 (cont.)
ANY ILLICIT DRUG
Trends in Annual Prevalence
among Respondents of Modal Ages 18 through 55, by Age Group

Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Ages 31–32 [a]	Age 35	Age 40	Age 45	Age 50	Age 55
1976	48.1												
1977	51.1												
1978	53.8	55.8											
1979	54.2	54.5											
1980	53.1	54.5	55.3										
1981	52.1	53.4	55.4										
1982	49.4	50.2	51.2	51.7									
1983	47.4	47.4	49.9	48.9									
1984	45.8	45.9	47.3	44.0	44.0								
1985	46.3	45.7	46.3	47.8	45.2								
1986	44.3	42.6	45.8	42.8	39.3	38.4							
1987	41.7	39.5	42.3	37.9	40.1	36.2							
1988	38.5	39.4	38.2	36.6	34.4	32.5	30.5						
1989	35.4	35.7	35.0	31.4	30.5	30.9	28.9						
1990	32.5	32.3	32.7	30.7	29.6	27.4	23.0	23.7					
1991	29.4	28.1	29.9	27.0	25.2	23.9	24.5	23.8					
1992	27.1	29.7	30.0	29.2	26.4	25.3	23.1	21.9					
1993	31.0	30.5	30.2	29.8	25.6	24.6	21.7	22.3					
1994	35.8	32.2	31.6	27.3	25.5	23.6	22.4	22.4	19.5				
1995	39.0	35.6	31.9	28.5	27.3	23.9	21.3	19.8	21.6				
1996	40.2	36.1	33.0	27.6	23.4	23.7	22.7	21.7	21.2				
1997	42.4	36.7	33.5	27.3	25.4	20.7	22.2	21.2	20.3				
1998	41.4	40.6	34.1	27.4	23.9	22.0	19.6	19.3	18.1	20.3			
1999	42.1	40.4	33.3	31.1	24.5	20.8	19.0	17.7	17.7	16.7			
2000	40.9	39.3	36.9	29.6	25.5	21.4	20.3	17.6	19.1	17.2			
2001	41.4	38.4	40.2	31.1	27.4	22.9	21.1	20.2	17.8	15.8			
2002	41.0	39.4	36.7	35.2	27.6	22.9	20.9	—	18.1	18.2			
2003	39.3	38.1	38.3	34.6	27.5	26.3	20.6	—	17.9	15.8	17.8		
2004	38.8	38.0	36.5	34.5	31.6	26.8	22.0	—	18.5	17.5	15.8		
2005	38.4	38.9	36.4	31.9	32.0	24.3	25.2	—	18.2	19.1	15.3		
2006	36.5	36.3	36.0	32.7	28.6	25.7	25.9	—	17.5	16.2	17.2		
2007	35.9	35.2	35.0	34.1	29.3	28.5	22.7	—	17.5	17.4	18.3		
2008	36.6	35.5	36.7	34.4	31.8	30.1	28.2	—	22.1	17.5	17.3	17.9	
2009	36.5	35.5	38.8	34.1	29.6	27.4	27.9	—	20.0	19.1	17.0	16.0	
2010	38.3	32.5	38.1	36.3	31.6	27.1	26.2	—	20.2	16.7	19.1	18.3	
2011	40.0	37.9	37.5	35.4	32.1	29.9	26.2	—	24.2	16.9	17.8	16.8	
2012	39.7	36.2	36.8	35.3	29.7	31.6	25.1	—	21.1	17.6	18.6	18.6	
2013	40.1	37.5	42.4	35.9	32.0	34.9	25.6	—	23.3	18.7	17.7	17.0	16.6
2014	38.7	40.8	40.6	37.2	36.3	32.5	31.7	—	26.6	17.5	17.1	17.1	15.8
2015	38.6	40.6	42.0	41.2	38.1	33.9	27.5	—	28.0	19.6	18.4	19.2	18.3

Source. The Monitoring the Future study, the University of Michigan.

Notes. ' — ' indicates data not available.

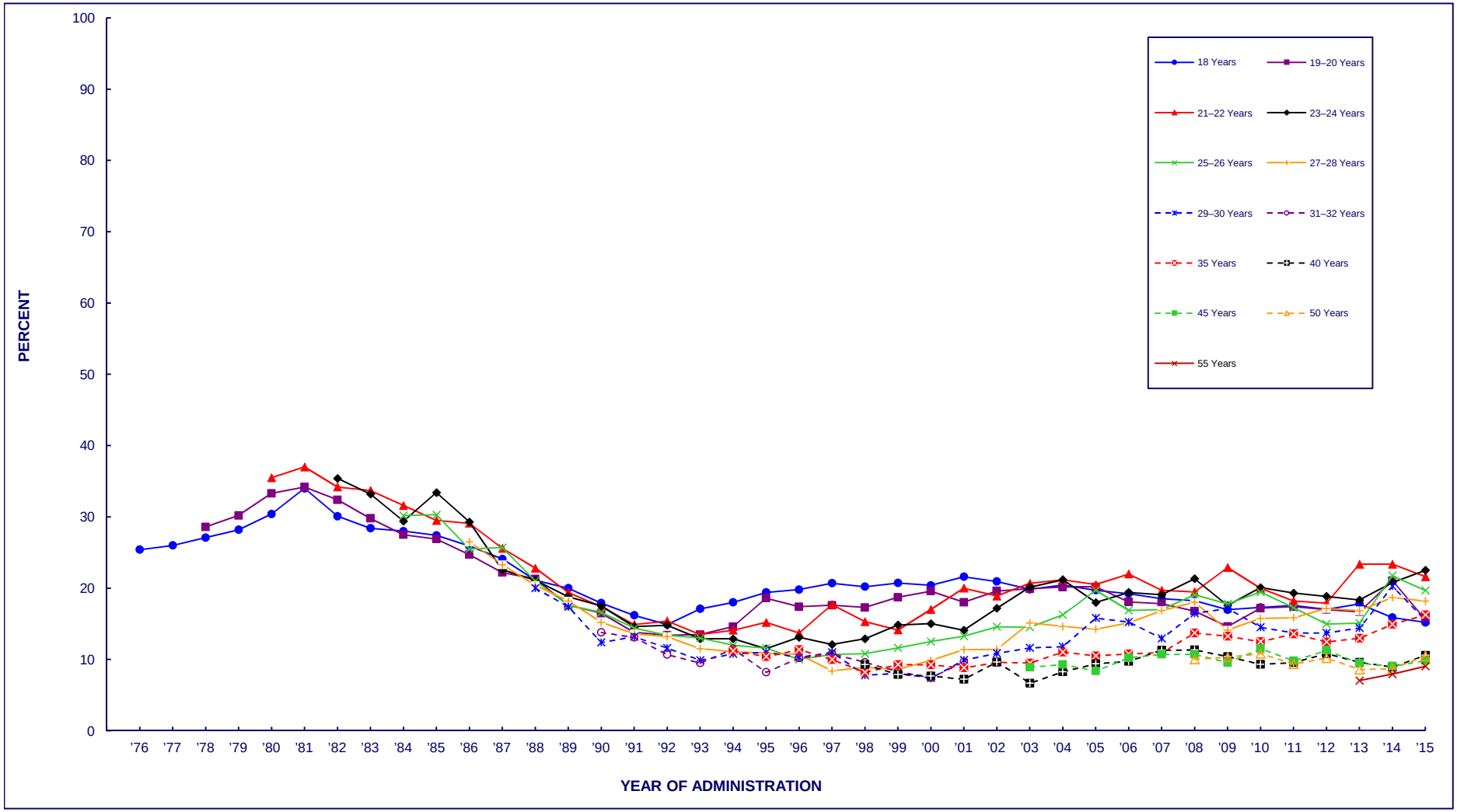
[a]Beginning in 2002, respondents were followed through age 30 instead of age 32 as in past years.

FIGURE 5-2

ANY ILLICIT DRUG OTHER THAN MARIJUANA

Trends in Annual Prevalence

among Respondents of Modal Ages 18 through 55, by Age Group



(Figure continued on next page.)

FIGURE 5-2 (cont.)
ANY ILLICIT DRUG OTHER THAN MARIJUANA
Trends in Annual Prevalence
among Respondents of Modal Ages 18 through 55, by Age Group

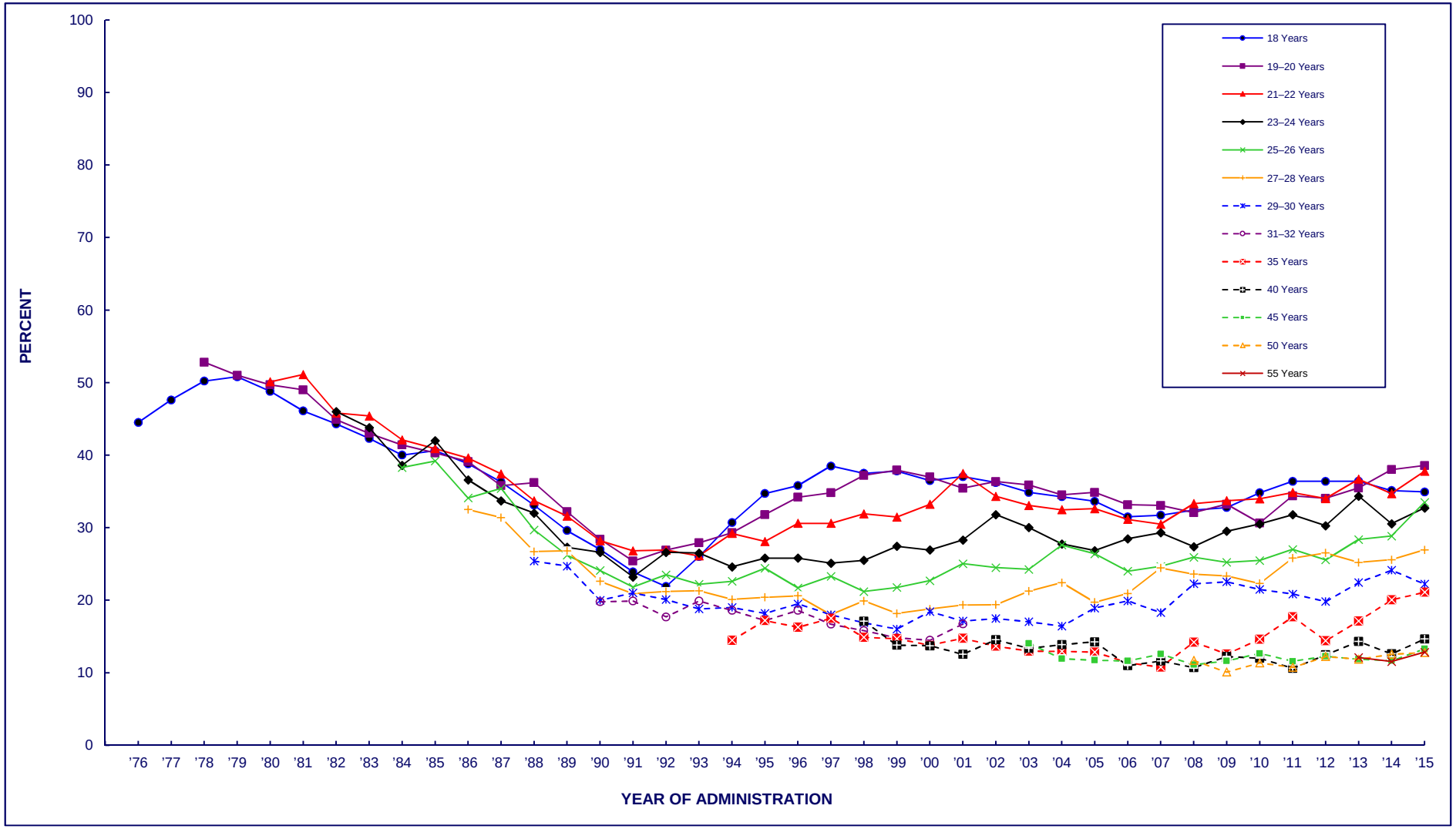
Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Ages 31–32 [a]	Age 35	Age 40	Age 45	Age 50	Age 55
1976	25.4												
1977	26.0												
1978	27.1	28.6											
1979	28.2	30.2											
1980	30.4	33.3	35.5										
1981	34.0	34.2	37.0										
1982	30.1	32.4	34.2	35.4									
1983	28.4	29.8	33.7	33.2									
1984	28.0	27.5	31.6	29.4	30.2								
1985	27.4	26.9	29.5	33.4	30.3								
1986	25.9	24.7	29.1	29.3	25.5	26.5							
1987	24.1	22.2	25.6	22.6	25.7	23.3							
1988	21.1	21.3	22.8	21.1	21.0	20.4	20.0						
1989	20.0	17.6	19.4	18.8	17.6	18.2	17.4						
1990	17.9	16.5	17.4	17.5	16.6	15.2	12.4	13.8					
1991	16.2	13.8	14.9	14.6	14.4	13.6	13.2	13.1					
1992	14.9	13.4	15.4	14.8	13.4	13.2	11.6	10.7					
1993	17.1	13.5	13.5	12.9	13.0	11.5	9.9	9.5					
1994	18.0	14.6	14.1	12.9	12.0	11.1	10.8	11.5	11.2				
1995	19.4	18.6	15.2	11.5	11.6	10.9	11.0	8.2	10.4				
1996	19.8	17.4	13.7	13.1	10.0	10.7	10.3	10.2	11.4				
1997	20.7	17.6	17.7	12.1	10.7	8.4	11.0	10.8	10.0				
1998	20.2	17.3	15.3	12.9	10.8	8.9	7.8	9.6	8.2	9.3			
1999	20.7	18.7	14.1	14.8	11.6	8.6	8.1	8.3	9.3	7.9			
2000	20.4	19.6	17.0	15.0	12.5	9.9	7.4	7.4	9.3	7.7			
2001	21.6	18.0	20.0	14.1	13.3	11.4	9.9	9.7	8.8	7.3			
2002	20.9	19.6	18.9	17.2	14.6	11.4	10.9	—	9.6	9.7			
2003	19.8	19.9	20.7	20.1	14.5	15.1	11.6	—	9.5	6.7	8.9		
2004	20.5	20.2	21.2	21.2	16.3	14.6	11.8	—	11.0	8.3	9.3		
2005	19.7	20.2	20.5	18.0	19.7	14.2	15.8	—	10.5	9.4	8.4		
2006	19.2	18.1	22.0	19.4	16.9	15.1	15.3	—	10.8	9.8	10.3		
2007	18.5	17.8	19.7	19.1	17.0	16.9	13.0	—	11.0	11.3	10.7		
2008	18.3	16.8	19.5	21.3	19.1	18.0	16.5	—	13.7	11.3	10.7	10.0	
2009	17.0	14.6	22.9	17.6	17.8	14.1	17.2	—	13.3	10.4	9.6	10.3	
2010	17.3	17.2	20.0	20.1	19.5	15.8	14.5	—	12.5	9.3	11.5	10.8	
2011	17.6	17.4	18.2	19.3	17.3	15.8	13.7	—	13.6	9.6	9.8	9.4	
2012	17.0	17.0	17.9	18.8	15.0	17.2	13.7	—	12.5	10.8	11.3	10.2	
2013	17.8	16.7	23.4	18.3	15.1	16.8	14.4	—	13.0	9.6	9.5	8.6	7.0
2014	15.9	21.1	23.4	20.8	21.7	18.7	20.3	—	15.0	8.9	9.1	8.7	7.9
2015	15.2	15.6	21.6	22.5	19.7	18.2	15.5	—	16.3	10.6	9.9	10.5	9.0

Source. The Monitoring the Future study, the University of Michigan.

Notes. ' — ' indicates data not available.

[a]Beginning in 2002, respondents were followed through age 30 instead of age 32 as in past years.

FIGURE 5-3a
MARIJUANA
Trends in Annual Prevalence
among Respondents of Modal Ages 18 through 55, by Age Group



(Figure continued on next page.)

FIGURE 5-3a (cont.)
MARIJUANA
Trends in Annual Prevalence
among Respondents of Modal Ages 18 through 55, by Age Group

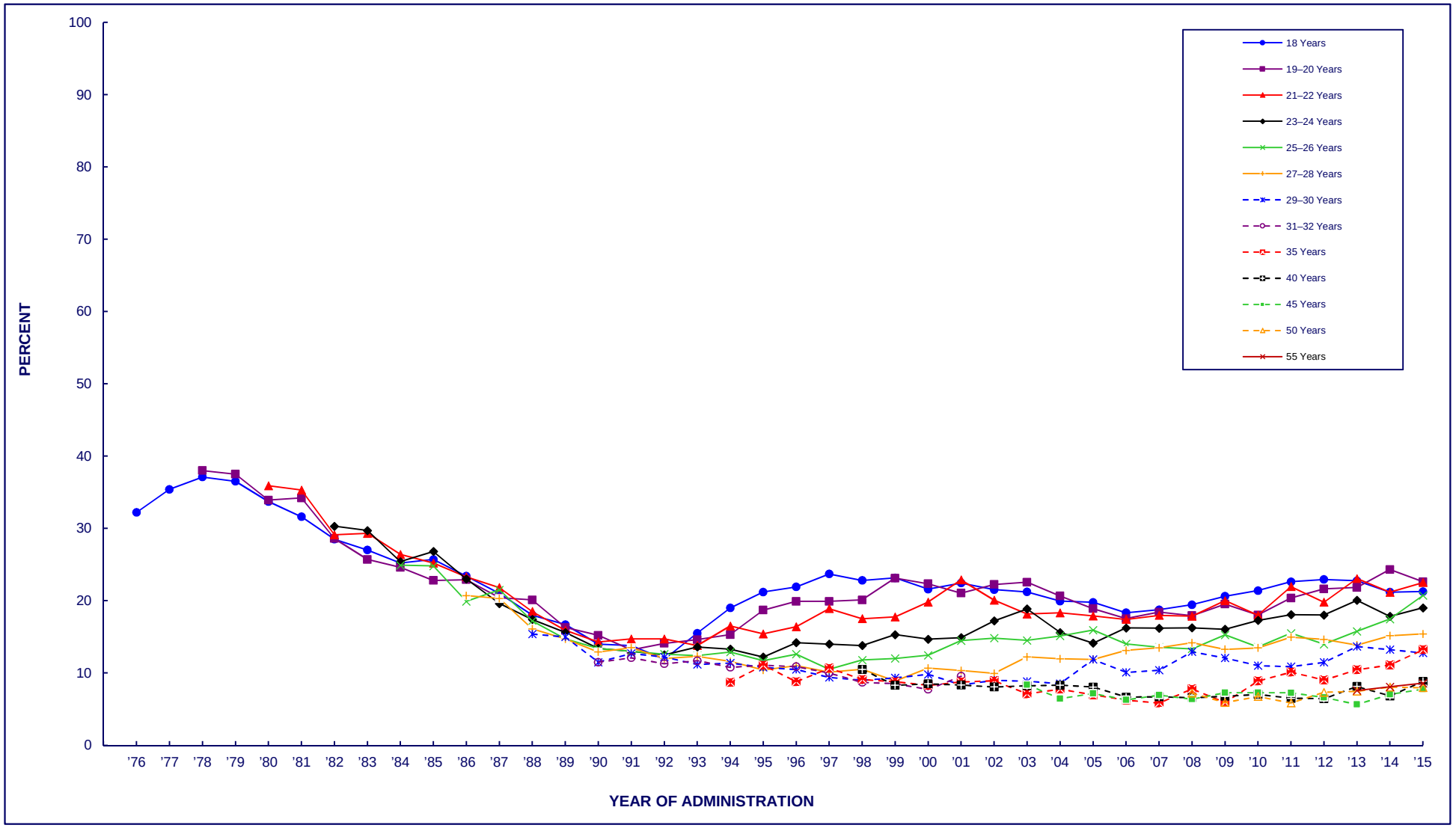
Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Ages 31–32 [a]	Age 35	Age 40	Age 45	Age 50	Age 55
1976	44.5												
1977	47.6												
1978	50.2	52.8											
1979	50.8	51.0											
1980	48.8	49.7	50.1										
1981	46.1	49.0	51.1										
1982	44.3	44.9	45.8	46.0									
1983	42.3	43.0	45.4	43.8									
1984	40.0	41.4	42.1	38.6	38.3								
1985	40.6	40.3	40.9	42.0	39.2								
1986	38.8	39.1	39.6	36.6	34.1	32.5							
1987	36.3	35.8	37.4	33.7	35.4	31.4							
1988	33.1	36.2	33.7	32.0	29.7	26.7	25.4						
1989	29.6	32.2	31.6	27.3	26.2	26.8	24.7						
1990	27.0	28.4	28.2	26.6	24.1	22.6	20.0	19.8					
1991	23.9	25.4	26.8	23.2	21.8	20.9	21.0	19.9					
1992	21.9	26.9	26.9	26.6	23.5	21.2	20.1	17.7					
1993	26.0	27.9	26.1	26.5	22.2	21.3	18.8	19.9					
1994	30.7	29.3	29.2	24.6	22.6	20.1	19.0	18.6	14.5				
1995	34.7	31.8	28.1	25.8	24.4	20.4	18.2	17.2	17.2				
1996	35.8	34.2	30.6	25.8	21.7	20.6	19.5	18.6	16.3				
1997	38.5	34.8	30.6	25.1	23.3	18.0	18.0	16.7	17.5				
1998	37.5	37.2	31.9	25.5	21.2	19.9	16.9	15.8	14.9	17.1			
1999	37.8	37.9	31.5	27.4	21.8	18.2	16.0	14.8	14.7	13.8			
2000	36.5	37.0	33.2	26.9	22.7	18.8	18.4	14.5	13.8	13.7			
2001	37.0	35.4	37.5	28.3	25.0	19.4	17.1	16.7	14.8	12.5			
2002	36.2	36.4	34.3	31.8	24.5	19.4	17.5	—	13.7	14.6			
2003	34.9	35.9	33.1	30.0	24.3	21.2	17.0	—	13.0	13.4	14.0		
2004	34.3	34.5	32.5	27.7	27.6	22.4	16.4	—	13.0	13.9	11.9		
2005	33.6	34.9	32.6	26.8	26.4	19.7	18.9	—	12.9	14.3	11.7		
2006	31.5	33.2	31.1	28.5	24.0	20.9	19.9	—	11.4	11.0	11.6		
2007	31.7	33.1	30.5	29.3	24.7	24.4	18.3	—	10.8	11.6	12.6		
2008	32.4	32.1	33.3	27.4	25.9	23.6	22.3	—	14.2	10.7	11.1	11.7	
2009	32.8	33.2	33.7	29.5	25.2	23.3	22.5	—	12.6	12.2	11.6	10.1	
2010	34.8	30.6	34.0	30.5	25.5	22.3	21.5	—	14.6	12.0	12.7	11.4	
2011	36.4	34.4	34.8	31.8	27.0	25.8	20.9	—	17.7	10.6	11.6	10.8	
2012	36.4	34.0	34.0	30.3	25.6	26.5	19.8	—	14.4	12.5	12.3	12.2	
2013	36.4	35.5	36.7	34.3	28.4	25.2	22.4	—	17.1	14.3	11.9	11.9	12.1
2014	35.1	38.0	34.7	30.5	28.8	25.6	24.1	—	20.0	12.6	11.7	12.6	11.5
2015	34.9	38.6	37.8	32.7	33.5	26.9	22.2	—	21.1	14.7	13.3	12.8	12.8

Source. The Monitoring the Future study, the University of Michigan.

Notes. ' — ' indicates data not available.

[a] Beginning in 2002, respondents were followed through age 30 instead of age 32 as in past years.

FIGURE 5-3b
MARIJUANA
Trends in 30-Day Prevalence
among Respondents of Modal Ages 18 through 55, by Age Group



(Figure continued on next page.)

FIGURE 5-3b (cont.)
MARIJUANA
Trends in 30-Day Prevalence
among Respondents of Modal Ages 18 through 55, by Age Group

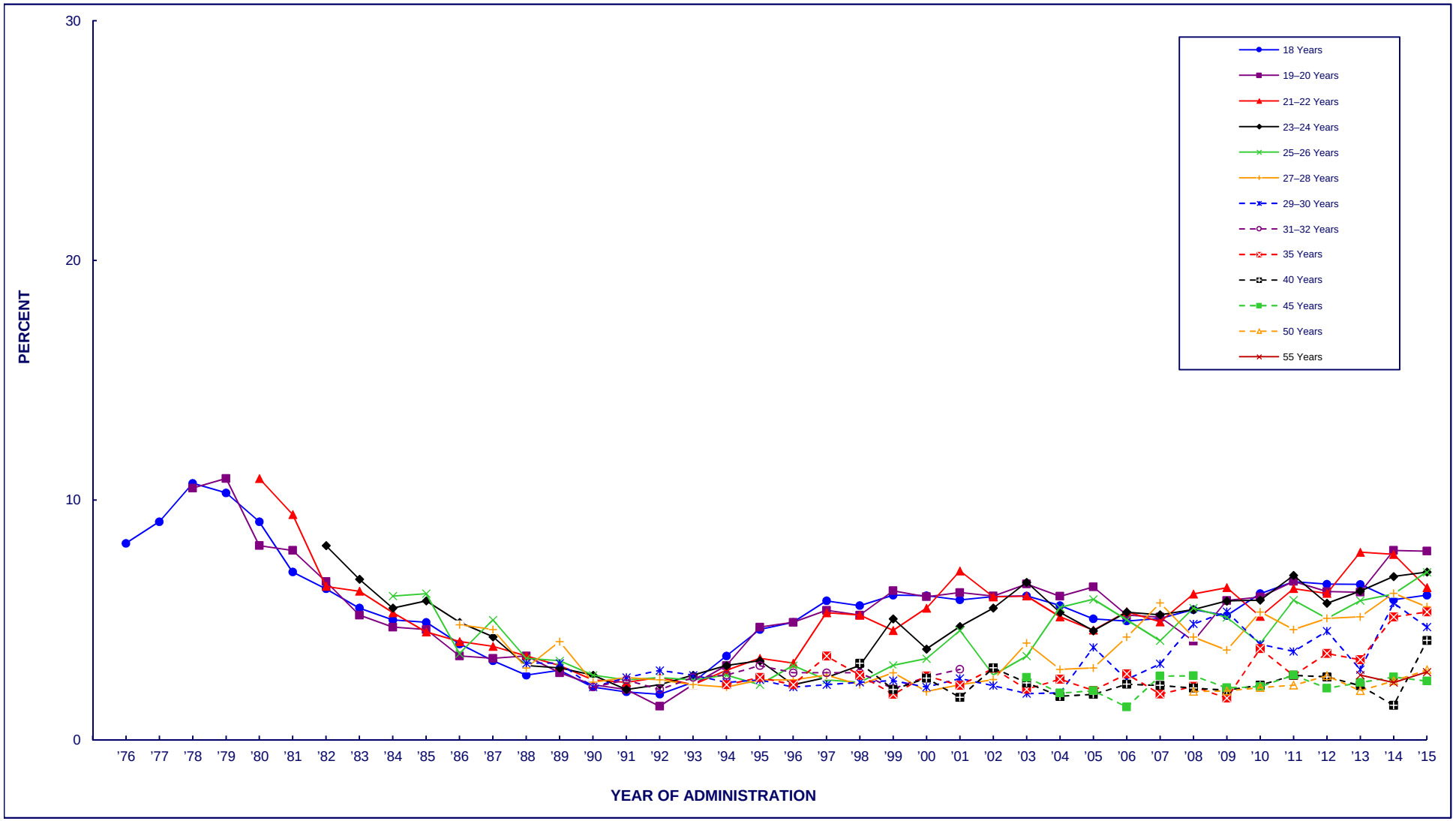
Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Ages 31–32 [a]	Age 35	Age 40	Age 45	Age 50	Age 55
1976	32.2												
1977	35.4												
1978	37.1	38.0											
1979	36.5	37.5											
1980	33.7	33.9	35.9										
1981	31.6	34.2	35.3										
1982	28.5	28.6	29.1	30.3									
1983	27.0	25.7	29.3	29.7									
1984	25.2	24.6	26.4	25.4	24.9								
1985	25.7	22.8	25.2	26.8	24.8								
1986	23.4	22.9	23.3	23.0	19.9	20.7							
1987	21.0	20.4	21.8	19.6	21.5	20.3							
1988	18.0	20.1	18.5	17.4	17.2	16.1	15.4						
1989	16.7	16.3	15.9	15.6	14.7	14.7	15.0						
1990	14.0	15.2	14.3	13.4	13.4	12.9	11.5	11.5					
1991	13.8	13.2	14.7	13.0	13.0	13.5	12.7	12.1					
1992	11.9	14.1	14.7	12.5	12.6	12.0	12.2	11.3					
1993	15.5	14.6	13.8	13.6	12.4	12.3	11.2	11.7					
1994	19.0	15.3	16.5	13.3	12.9	11.6	11.4	10.8	8.7				
1995	21.2	18.7	15.4	12.2	11.7	10.4	10.8	11.1	11.1				
1996	21.9	19.9	16.4	14.2	12.6	11.0	10.5	10.9	8.8				
1997	23.7	19.9	18.9	14.0	10.5	10.1	9.4	10.0	10.7				
1998	22.8	20.1	17.5	13.8	11.8	10.5	9.0	8.7	9.1	10.5			
1999	23.1	23.1	17.8	15.3	12.0	8.9	9.3	8.5	8.8	8.3			
2000	21.6	22.3	19.8	14.7	12.5	10.7	9.8	7.7	8.3	8.5			
2001	22.4	21.0	22.9	14.9	14.5	10.3	8.3	9.6	8.8	8.3			
2002	21.5	22.2	20.1	17.2	14.8	9.9	9.0	—	8.9	8.1			
2003	21.2	22.5	18.2	18.9	14.5	12.2	8.9	—	7.1	8.2	8.4		
2004	19.9	20.7	18.3	15.6	15.1	12.0	8.5	—	7.8	8.3	6.5		
2005	19.8	18.9	17.9	14.1	15.9	11.9	11.9	—	7.0	8.1	7.2		
2006	18.3	17.5	17.4	16.2	14.0	13.1	10.1	—	6.2	6.7	6.3		
2007	18.8	18.4	18.0	16.2	13.6	13.5	10.4	—	5.8	6.7	6.9		
2008	19.4	17.9	17.8	16.2	13.3	14.2	12.9	—	7.8	6.6	6.4	7.2	
2009	20.6	19.5	20.0	16.0	15.3	13.3	12.1	—	5.9	6.8	7.3	5.9	
2010	21.4	18.0	18.0	17.3	13.6	13.5	11.0	—	8.9	7.1	7.3	6.8	
2011	22.6	20.4	21.9	18.1	15.5	15.0	10.9	—	10.1	6.5	7.3	5.9	
2012	22.9	21.6	19.8	18.0	14.0	14.6	11.5	—	9.1	6.5	6.6	7.3	
2013	22.7	21.8	23.0	20.0	15.8	13.9	13.7	—	10.4	8.2	5.7	7.5	7.6
2014	21.2	24.3	21.2	17.8	17.4	15.1	13.2	—	11.1	6.8	7.1	8.1	8.1
2015	21.3	22.6	22.5	19.0	20.7	15.4	12.8	—	13.2	8.8	7.8	8.0	8.6

Source. The Monitoring the Future study, the University of Michigan.

Notes. ' — ' indicates data not available.

[a]Beginning in 2002, respondents were followed through age 30 instead of age 32 as in past years.

FIGURE 5-3c
MARIJUANA
Trends in 30-Day Prevalence of Daily Use
among Respondents of Modal Ages 18 through 55, by Age Group



(Figure continued on next page.)

FIGURE 5-3c (cont.)
MARIJUANA
Trends in 30-Day Prevalence of Daily Use among Respondents of Modal Ages 18 through 55, by Age Group

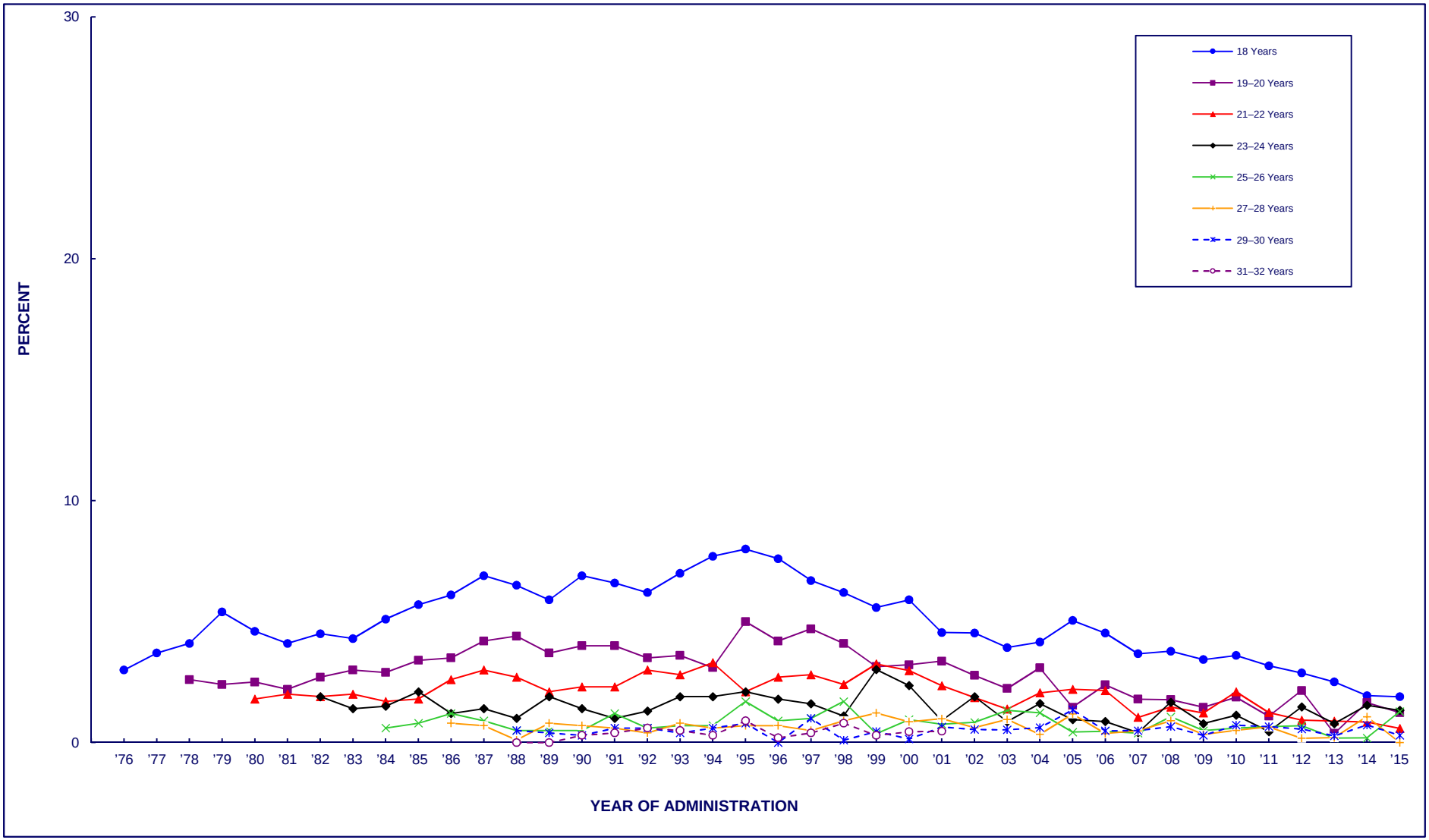
Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Ages 31–32 [a]	Age 35	Age 40	Age 45	Age 50	Age 55
1976	8.2												
1977	9.1												
1978	10.7	10.5											
1979	10.3	10.9											
1980	9.1	8.1	10.9										
1981	7.0	7.9	9.4										
1982	6.3	6.6	6.4	8.1									
1983	5.5	5.2	6.2	6.7									
1984	5.0	4.7	5.3	5.5	6.0								
1985	4.9	4.6	4.5	5.8	6.1								
1986	4.0	3.5	4.1	4.9	3.6	4.8							
1987	3.3	3.4	3.9	4.3	5.0	4.6							
1988	2.7	3.5	3.5	3.1	3.4	3.0	3.2						
1989	2.9	2.8	3.1	3.0	3.3	4.1	3.2						
1990	2.2	2.3	2.5	2.7	2.7	2.4	2.2	2.2					
1991	2.0	2.1	2.4	2.1	2.5	2.6	2.6	2.5					
1992	1.9	1.4	2.6	2.3	2.6	2.5	2.9	2.1					
1993	2.4	2.3	2.3	2.7	2.5	2.3	2.7	2.6					
1994	3.5	3.1	2.9	3.1	2.7	2.2	2.4	2.7	2.3				
1995	4.6	4.7	3.4	3.3	2.3	2.5	2.5	3.1	2.6				
1996	4.9	4.9	3.2	2.3	3.1	2.5	2.2	2.8	2.3				
1997	5.8	5.4	5.3	2.6	2.5	2.7	2.3	2.8	3.5				
1998	5.6	5.2	5.2	3.1	2.4	2.3	2.4	2.8	2.7	3.2			
1999	6.0	6.2	4.6	5.1	3.1	2.8	2.5	2.1	1.9	2.1			
2000	6.0	6.0	5.5	3.8	3.4	2.0	2.2	2.6	2.7	2.6			
2001	5.8	6.1	7.0	4.7	4.6	2.3	2.6	2.9	2.3	1.8			
2002	6.0	6.0	6.0	5.5	2.7	2.5	2.3	—	3.0	3.0			
2003	6.0	6.5	6.0	6.6	3.5	4.0	1.9	—	2.1	2.4	2.6		
2004	5.6	6.0	5.1	5.3	5.5	2.9	2.0	—	2.5	1.8	2.0		
2005	5.0	6.4	4.6	4.5	5.9	3.0	3.9	—	2.1	1.9	2.1		
2006	5.0	5.2	5.3	5.3	5.0	4.3	2.5	—	2.8	2.3	1.4		
2007	5.1	5.1	4.9	5.2	4.1	5.7	3.2	—	1.9	2.3	2.7		
2008	5.4	4.1	6.1	5.4	5.5	4.3	4.8	—	2.2	2.2	2.7	2.0	
2009	5.2	5.8	6.3	5.8	5.1	3.7	5.4	—	1.7	2.1	2.2	2.0	
2010	6.1	6.0	5.1	5.8	4.0	5.3	4.0	—	3.8	2.3	2.2	2.2	
2011	6.6	6.6	6.3	6.9	5.8	4.6	3.7	—	2.7	2.7	2.7	2.3	
2012	6.5	6.2	6.1	5.7	5.1	5.1	4.5	—	3.6	2.6	2.2	2.7	
2013	6.5	6.2	7.8	6.2	5.8	5.1	2.9	—	3.3	2.3	2.4	2.1	2.7
2014	5.8	7.9	7.7	6.8	6.1	6.1	5.7	—	5.1	1.4	2.6	2.5	2.4
2015	6.0	7.9	6.3	7.0	7.0	5.5	4.7	—	5.3	4.1	2.5	2.9	2.8

Source. The Monitoring the Future study, the University of Michigan.

Notes. ' — ' indicates data not available.

[a]Beginning in 2002, respondents were followed through age 30 instead of age 32 as in past years.

FIGURE 5-4
INHALANTS [a]
Trends in Annual Prevalence
among Respondents of Modal Ages 18 through 32, [b] by Age Group



(Figure continued on next page.)

FIGURE 5-4 (cont.)
INHALANTS [a]
Trends in Annual Prevalence among Respondents of Modal Ages 18 through 32, [b] by Age Group

Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Ages 31–32 [c]
1976	3.0							
1977	3.7							
1978	4.1	2.6						
1979	5.4	2.4						
1980	4.6	2.5	1.8					
1981	4.1	2.2	2.0					
1982	4.5	2.7	1.9	1.9				
1983	4.3	3.0	2.0	1.4				
1984	5.1	2.9	1.7	1.5	0.6			
1985	5.7	3.4	1.8	2.1	0.8			
1986	6.1	3.5	2.6	1.2	1.2	0.8		
1987	6.9	4.2	3.0	1.4	0.9	0.7		
1988	6.5	4.4	2.7	1.0	0.5	0.1	0.5	
1989	5.9	3.7	2.1	1.9	0.5	0.8	0.4	
1990	6.9	4.0	2.3	1.4	0.5	0.7	0.3	0.3
1991	6.6	4.0	2.3	1.0	1.2	0.6	0.6	0.4
1992	6.2	3.5	3.0	1.3	0.6	0.4	0.6	0.6
1993	7.0	3.6	2.8	1.9	0.7	0.8	0.4	0.5
1994	7.7	3.1	3.3	1.9	0.7	0.6	0.6	0.3
1995	8.0	5.0	2.1	2.1	1.7	0.7	0.8	0.9
1996	7.6	4.2	2.7	1.8	0.9	0.7	*	0.2
1997	6.7	4.7	2.8	1.6	1.0	0.5	1.0	0.4
1998	6.2	4.1	2.4	1.1	1.7	0.9	0.1	0.8
1999	5.6	3.1	3.3	3.0	0.4	1.2	0.5	0.3
2000	5.9	3.2	3.0	2.4	1.0	0.9	0.1	0.5
2001	4.5	3.4	2.4	0.9	0.8	1.0	0.7	0.5
2002	4.5	2.8	1.9	1.9	0.8	0.6	0.5	—
2003	3.9	2.2	1.4	0.9	1.3	1.0	0.5	—
2004	4.2	3.1	2.1	1.6	1.2	0.3	0.6	—
2005	5.0	1.5	2.2	1.0	0.4	1.2	1.4	—
2006	4.5	2.4	2.1	0.9	0.5	0.4	0.5	—
2007	3.7	1.8	1.0	0.4	0.4	0.5	0.5	—
2008	3.8	1.8	1.5	1.7	1.1	0.9	0.7	—
2009	3.4	1.5	1.2	0.8	0.5	0.3	0.3	—
2010	3.6	1.9	2.1	1.1	0.6	0.5	0.7	—
2011	3.2	1.1	1.2	0.5	0.7	0.6	0.7	—
2012	2.9	2.1	0.9	1.5	0.7	0.2	0.6	—
2013	2.5	0.4	0.9	0.8	0.2	0.2	0.3	—
2014	1.9	1.7	0.8	1.5	0.2	1.1	0.7	—
2015	1.9	1.2	0.6	1.3	1.3	*	0.3	—

Source. The Monitoring the Future study, the University of Michigan.

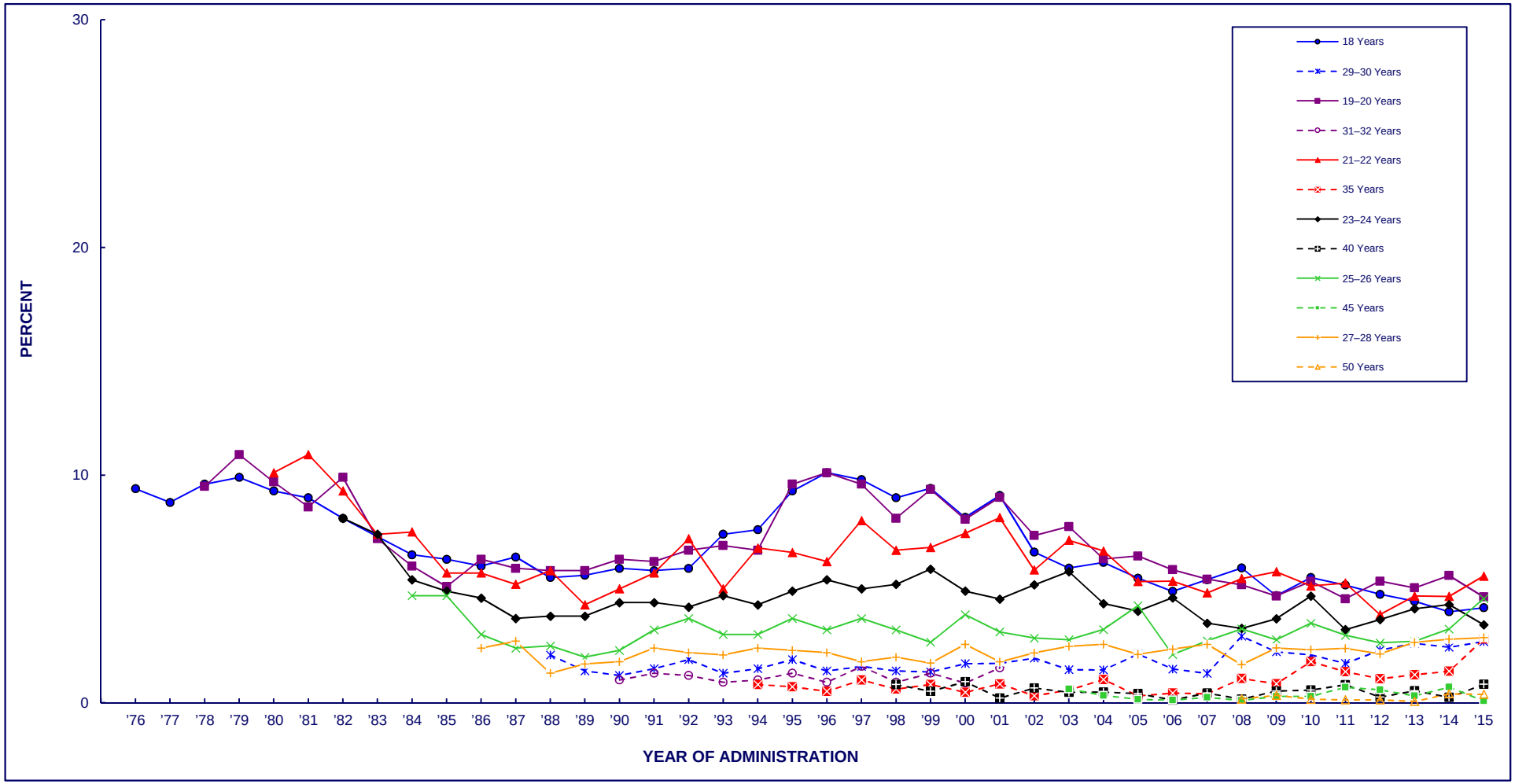
Notes. ' * ' indicates a percentage of less than 0.05%. ' — ' indicates data not available.

[a]Unadjusted for the possible underreporting of amyl and butyl nitrites. Chapter 5, *Volume I*, shows that such an adjustment would flatten the trend for seniors considerably because the line was adjusted up more in the earlier years, when nitrite use was more prevalent. Questions about nitrite use were dropped from the follow-up questionnaires beginning in 1995.

[b]Questions about the use of inhalants were not included in the questionnaires for 35-, 40-, 45-, and 50-year-olds.

[c]Beginning in 2002, respondents were followed through age 30 instead of age 32 as in past years.

FIGURE 5-5
HALLUCINOGENS [a]
Trends in Annual Prevalence
among Respondents of Modal Ages 18 through 50, [c] by Age Group



(Figure continued on next page.)

FIGURE 5-5 (cont.)
HALLUCINOGENS [a]
Trends in Annual Prevalence
among Respondents of Modal Ages 18 through 50, [c] by Age Group

Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Ages 31–32 [b]	Age 35	Age 40	Age 45	Age 50
1976	9.4											
1977	8.8											
1978	9.6	9.5										
1979	9.9	10.9										
1980	9.3	9.7	10.1									
1981	9.0	8.6	10.9									
1982	8.1	9.9	9.3	8.1								
1983	7.3	7.2	7.4	7.4								
1984	6.5	6.0	7.5	5.4	4.7							
1985	6.3	5.1	5.7	4.9	4.7							
1986	6.0	6.3	5.7	4.6	3.0	2.4						
1987	6.4	5.9	5.2	3.7	2.4	2.7						
1988	5.5	5.8	5.8	3.8	2.5	1.3	2.1					
1989	5.6	5.8	4.3	3.8	2.0	1.7	1.4					
1990	5.9	6.3	5.0	4.4	2.3	1.8	1.2	1.0				
1991	5.8	6.2	5.7	4.4	3.2	2.4	1.5	1.3				
1992	5.9	6.7	7.2	4.2	3.7	2.2	1.9	1.2				
1993	7.4	6.9	5.0	4.7	3.0	2.1	1.3	0.9				
1994	7.6	6.7	6.8	4.3	3.0	2.4	1.5	1.0	0.8			
1995	9.3	9.6	6.6	4.9	3.7	2.3	1.9	1.3	0.7			
1996	10.1	10.1	6.2	5.4	3.2	2.2	1.4	0.9	0.5			
1997	9.8	9.6	8.0	5.0	3.7	1.8	1.6	1.6	1.0			
1998	9.0	8.1	6.7	5.2	3.2	2.0	1.4	0.9	0.6	0.8		
1999	9.4	9.4	6.8	5.9	2.7	1.7	1.4	1.3	0.8	0.5		
2000	8.1	8.0	7.4	4.9	3.9	2.6	1.7	0.9	0.5	0.9		
2001	9.1	9.0	8.1	4.6	3.1	1.8	1.7	1.5	0.8	0.2		
2002	6.6	7.3	5.8	5.2	2.8	2.2	2.0	—	0.3	0.7		
2003	5.9	7.7	7.1	5.8	2.8	2.5	1.5	—	0.6	0.5	0.6	
2004	6.2	6.3	6.7	4.4	3.2	2.6	1.4	—	1.0	0.5	0.3	
2005	5.5	6.4	5.3	4.0	4.3	2.1	2.1	—	0.3	0.4	0.1	
2006	4.9	5.8	5.3	4.6	2.1	2.4	1.5	—	0.4	0.1	0.1	
2007	5.4	5.4	4.8	3.5	2.7	2.6	1.3	—	0.4	0.4	0.2	
2008	5.9	5.2	5.5	3.3	3.2	1.7	2.9	—	1.1	0.2	0.1	0.2
2009	4.7	4.7	5.8	3.7	2.8	2.4	2.2	—	0.8	0.5	0.3	0.3
2010	5.5	5.3	5.1	4.7	3.5	2.3	2.1	—	1.8	0.6	0.3	0.2
2011	5.2	4.6	5.3	3.2	3.0	2.4	1.7	—	1.4	0.8	0.7	0.1
2012	4.8	5.3	3.9	3.7	2.6	2.1	2.3	—	1.1	0.2	0.6	0.1
2013	4.5	5.0	4.7	4.1	2.7	2.7	2.6	—	1.2	0.5	0.3	0.1
2014	4.0	5.6	4.7	4.3	3.2	2.8	2.4	—	1.4	0.2	0.7	0.4
2015	4.2	4.6	5.6	3.4	4.6	2.9	2.7	—	2.8	0.8	0.1	0.4

Source. The Monitoring the Future study, the University of Michigan.

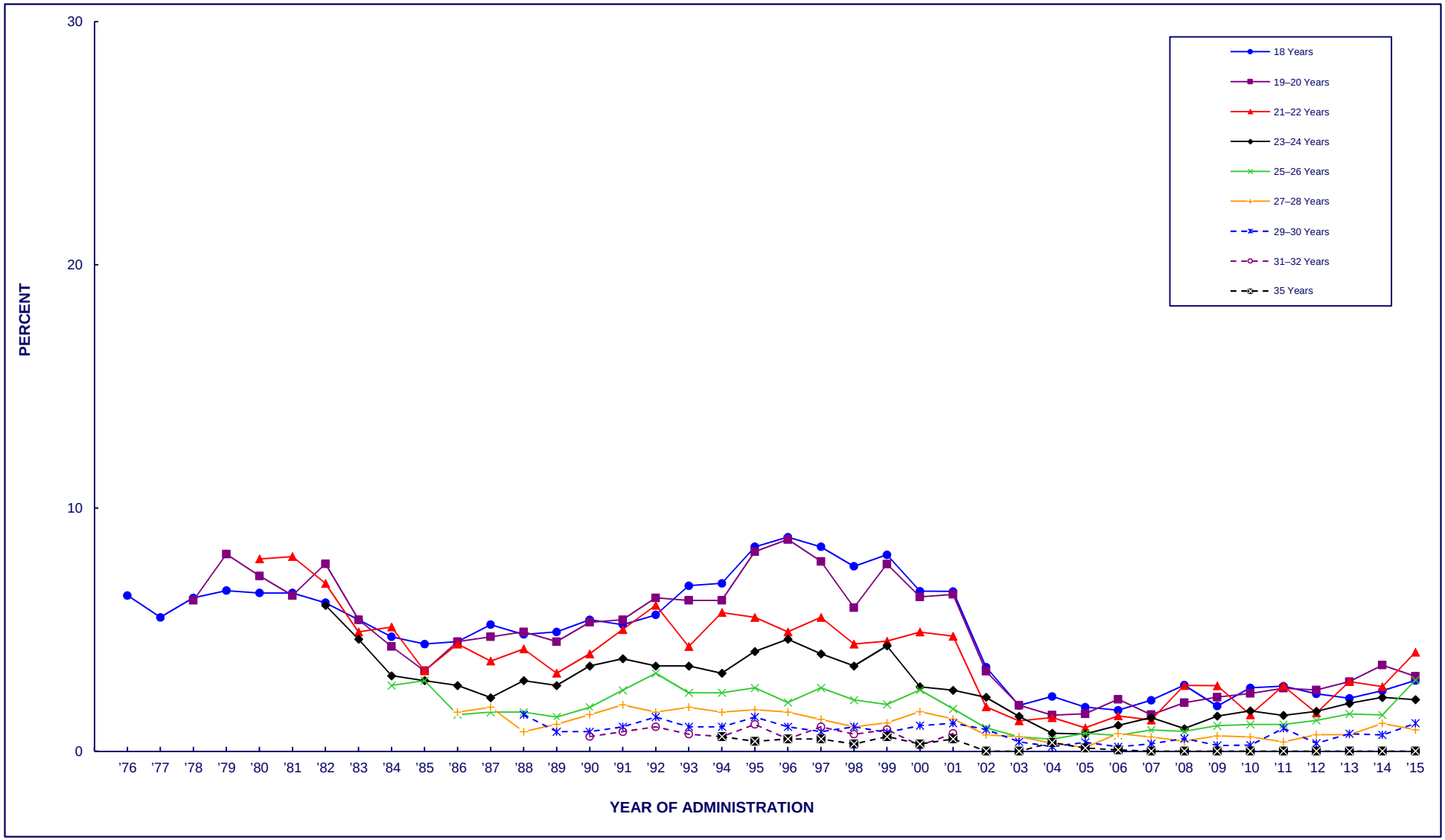
Notes. ' — ' indicates data not available.

[a]Unadjusted for the possible underreporting of PCP.

[b]Beginning in 2002, respondents were followed through age 30 instead of age 32 as in past years.

[c]Questions about the use of inhalants were not included in the questionnaires for 55-year-olds.

FIGURE 5-6
LSD
Trends in Annual Prevalence
among Respondents of Modal Ages 18 through 35,[u] by Age Group



(Figure continued on next page.)

FIGURE 5-6 (cont.)
LSD
Trends in Annual Prevalence among Respondents of Modal Ages 18 through 35, by Age Group

Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Ages 31–32 [a]	Age 35 [b]
1976	6.4								
1977	5.5								
1978	6.3	6.2							
1979	6.6	8.1							
1980	6.5	7.2	7.9						
1981	6.5	6.4	8.0						
1982	6.1	7.7	6.9	6.0					
1983	5.4	5.4	4.9	4.6					
1984	4.7	4.3	5.1	3.1	2.7				
1985	4.4	3.3	3.3	2.9	2.9				
1986	4.5	4.5	4.4	2.7	1.5	1.6			
1987	5.2	4.7	3.7	2.2	1.6	1.8			
1988	4.8	4.9	4.2	2.9	1.6	0.8	1.5		
1989	4.9	4.5	3.2	2.7	1.4	1.1	0.8		
1990	5.4	5.3	4.0	3.5	1.8	1.5	0.8	0.6	
1991	5.2	5.4	5.0	3.8	2.5	1.9	1.0	0.8	
1992	5.6	6.3	6.0	3.5	3.2	1.6	1.4	1.0	
1993	6.8	6.2	4.3	3.5	2.4	1.8	1.0	0.7	
1994	6.9	6.2	5.7	3.2	2.4	1.6	1.0	0.6	0.6
1995	8.4	8.2	5.5	4.1	2.6	1.7	1.4	1.1	0.4
1996	8.8	8.7	4.9	4.6	2.0	1.6	1.0	0.5	0.5
1997	8.4	7.8	5.5	4.0	2.6	1.3	0.8	1.0	0.5
1998	7.6	5.9	4.4	3.5	2.1	1.0	1.0	0.7	0.3
1999	8.1	7.7	4.5	4.3	1.9	1.2	0.8	0.9	0.6
2000	6.6	6.3	4.9	2.6	2.5	1.6	1.0	0.2	0.3
2001	6.6	6.4	4.7	2.5	1.7	1.3	1.1	0.7	0.5
2002	3.5	3.3	1.8	2.2	1.0	0.7	0.9	—	*
2003	1.9	1.9	1.2	1.4	0.6	0.6	0.4	—	*
2004	2.2	1.5	1.4	0.7	0.5	0.3	0.2	—	0.4
2005	1.8	1.5	1.0	0.7	0.7	0.1	0.4	—	0.1
2006	1.7	2.1	1.4	1.1	0.6	0.7	0.2	—	0.1
2007	2.1	1.5	1.3	1.4	0.9	0.6	0.3	—	—
2008	2.7	2.0	2.7	0.9	0.8	0.4	0.5	—	—
2009	1.9	2.2	2.7	1.4	1.0	0.6	0.2	—	—
2010	2.6	2.4	1.5	1.7	1.1	0.6	0.2	—	—
2011	2.7	2.6	2.7	1.5	1.1	0.4	0.9	—	—
2012	2.4	2.5	1.6	1.6	1.3	0.7	0.3	—	—
2013	2.2	2.9	2.9	2.0	1.5	0.7	0.7	—	—
2014	2.5	3.5	2.7	2.2	1.5	1.1	0.7	—	—
2015	2.9	3.1	4.1	2.1	2.9	0.9	1.1	—	—

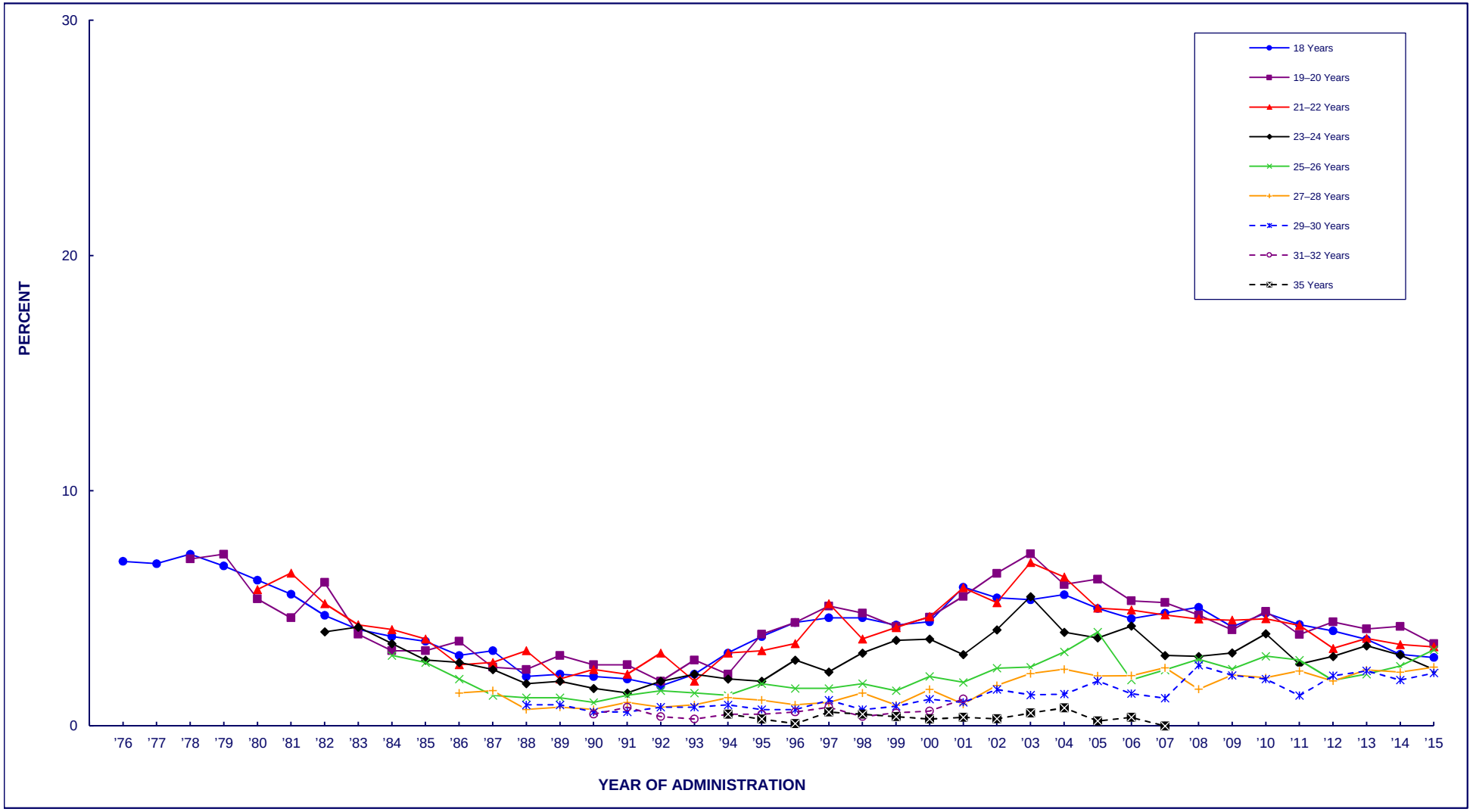
Source. The Monitoring the Future study, the University of Michigan.

Notes. ' * ' indicates a percentage of less than 0.05%. ' — ' indicates data not available.

[a]Beginning in 2002, respondents were followed through age 30 instead of age 32 as in past years.

[b]Questions about LSD use were not included in the questionnaires administered to the 40-, 45-, and 50-year-olds, or the 35-year-olds after 2006.

FIGURE 5-7
HALLUCINOGENS OTHER THAN LSD [a]
Trends in Annual Prevalence
among Respondents of Modal Ages 18 through 35, by Age Group



(Figure continued on next page.)

FIGURE 5-7 (cont.)
HALLUCINOGENS OTHER THAN LSD [a]
Trends in Annual Prevalence
among Respondents of Modal Ages 18 through 35, by Age Group

Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Ages 31–32 [b]	Age 35 [c]
1976	7.0								
1977	6.9								
1978	7.3	7.1							
1979	6.8	7.3							
1980	6.2	5.4	5.8						
1981	5.6	4.6	6.5						
1982	4.7	6.1	5.2	4.0					
1983	4.1	3.9	4.3	4.2					
1984	3.8	3.2	4.1	3.5	3.0				
1985	3.6	3.2	3.7	2.8	2.7				
1986	3.0	3.6	2.6	2.7	2.0	1.4			
1987	3.2	2.5	2.7	2.4	1.3	1.5			
1988	2.1	2.4	3.2	1.8	1.2	0.7	0.9		
1989	2.2	3.0	2.0	1.9	1.2	0.8	0.9		
1990	2.1	2.6	2.4	1.6	1.0	0.7	0.6	0.5	
1991	2.0	2.6	2.2	1.4	1.3	1.0	0.6	0.8	
1992	1.7	1.9	3.1	1.9	1.5	0.8	0.8	0.4	
1993	2.2	2.8	1.9	2.2	1.4	0.9	0.8	0.3	
1994	3.1	2.2	3.1	2.0	1.3	1.2	0.9	0.5	0.5
1995	3.8	3.9	3.2	1.9	1.8	1.1	0.7	0.5	0.3
1996	4.4	4.4	3.5	2.8	1.6	0.9	0.7	0.6	0.1
1997	4.6	5.1	5.2	2.3	1.6	1.0	1.1	0.8	0.6
1998	4.6	4.8	3.7	3.1	1.8	1.4	0.7	0.4	0.5
1999	4.3	4.2	4.2	3.6	1.5	0.9	0.8	0.6	0.4
2000	4.4	4.6	4.7	3.7	2.1	1.6	1.1	0.6	0.3
2001	5.9	5.5	5.9	3.0	1.9	0.9	1.0	1.1	0.4
2002	5.4	6.5	5.2	4.1	2.5	1.7	1.6	—	0.3
2003	5.4	7.3	6.9	5.5	2.5	2.2	1.3	—	0.6
2004	5.6	6.0	6.3	4.0	3.1	2.4	1.4	—	0.8
2005	5.0	6.2	5.0	3.7	4.0	2.1	1.9	—	0.2
2006	4.6	5.3	4.9	4.2	2.0	2.1	1.4	—	0.4
2007	4.8	5.2	4.7	3.0	2.4	2.5	1.2	—	—
2008	5.0	4.7	4.5	3.0	2.8	1.6	2.6	—	—
2009	4.2	4.1	4.5	3.1	2.4	2.2	2.2	—	—
2010	4.8	4.9	4.6	3.9	3.0	2.1	2.0	—	—
2011	4.3	3.9	4.3	2.6	2.8	2.3	1.3	—	—
2012	4.0	4.4	3.3	3.0	1.9	1.9	2.1	—	—
2013	3.7	4.1	3.7	3.4	2.2	2.4	2.3	—	—
2014	3.0	4.2	3.5	3.0	2.5	2.3	2.0	—	—
2015	2.9	3.5	3.4	2.4	3.2	2.5	2.3	—	—

Source. The Monitoring the Future study, the University of Michigan.

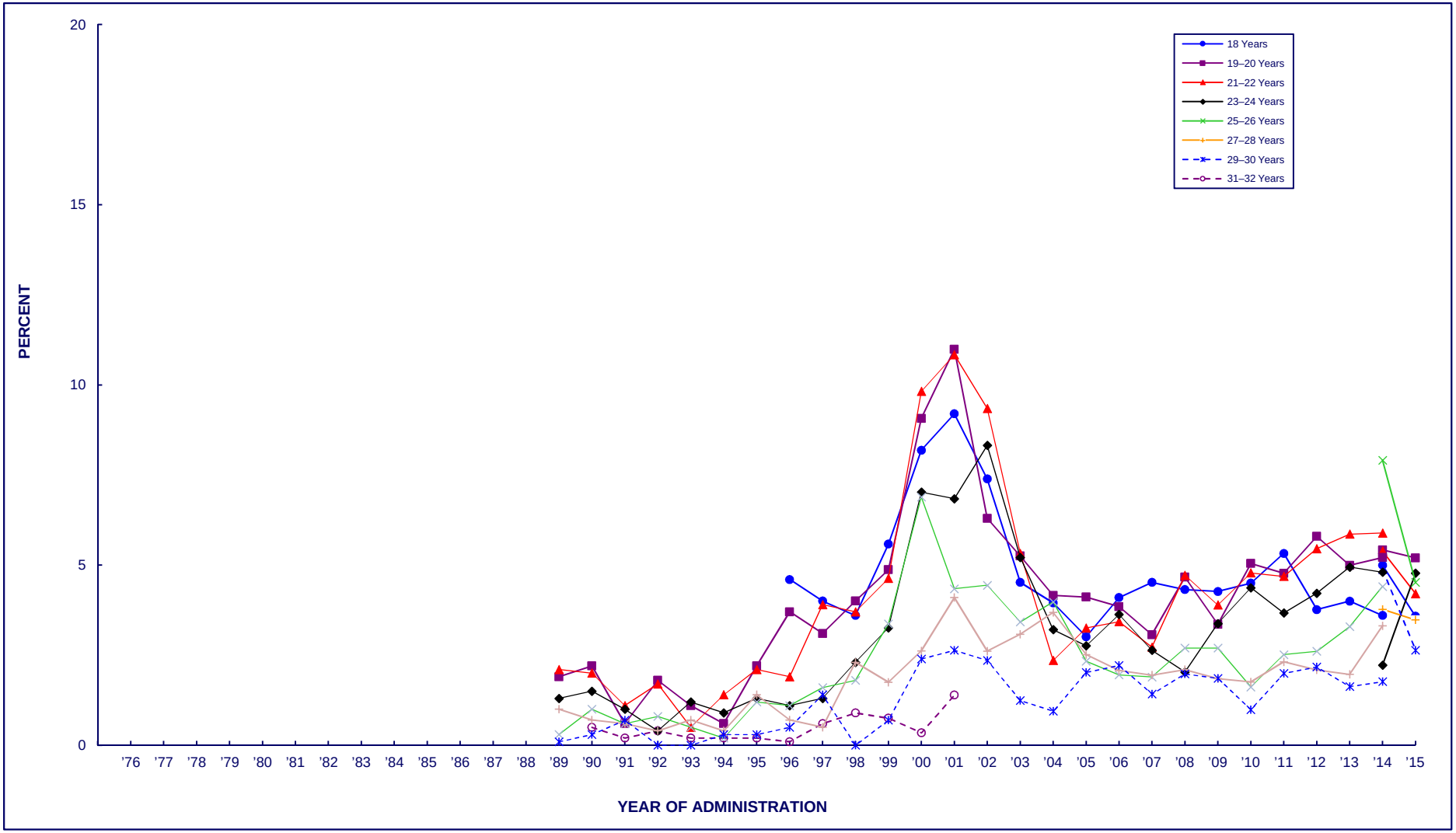
Notes. '— ' indicates data not available.

[a]Unadjusted for the possible underreporting of PCP.

[b]Beginning in 2002, respondents were followed through age 30 instead of age 32 as in past years.

[c]Questions about the use of hallucinogens other than LSD were not included in the questionnaires administered to the 40-, 45-, and 50-year-olds, or the 35-year-olds after 2006.

FIGURE 5-8
ECSTASY (MDMA)
Trends in Annual Prevalence
among Respondents of Modal Ages 18 through 32, [a] by Age Group



(Figure continued on next page.)

FIGURE 5-8 (cont.)
ECSTASY (MDMA)
Trends in Annual Prevalence among Respondents of Modal Ages 18 through 32, [a,c] by Age Group

	Age 18		Ages 19–20		Ages 21–22		Ages 23–24		Ages 25–26		Ages 27–28		Ages 29–30		Ages 31–32 [b]	
Year	Original	Revised	Original	Revised	Original	Revised	Original	Revised	Original	Revised	Original	Revised	Original	Revised	Original	Revised
1976																
1977																
1978																
1979																
1980																
1981																
1982																
1983																
1984																
1985																
1986																
1987																
1988																
1989			1.9		2.1		1.3		0.3		1.0		0.1			
1990			2.2		2.0		1.5		1.0		0.7		0.3		0.5	
1991			0.6		1.1		1.0		0.6		0.6		0.7		0.2	
1992			1.8		1.7		0.4		0.8		0.4		*		0.4	
1993			1.1		0.5		1.2		0.5		0.7		*		0.2	
1994			0.6		1.4		0.9		0.2		0.4		0.3		0.2	
1995			2.2		2.1		1.3		1.2		1.4		0.3		0.2	
1996	4.6		3.7		1.9		1.1		1.1		0.7		0.5		0.1	
1997	4.0		3.1		3.9		1.3		1.6		0.5		1.4		0.6	
1998	3.6		4.0		3.7		2.3		1.8		2.3		*		0.9	
1999	5.6		4.9		4.6		3.3		3.4		1.8		0.7		0.8	
2000	8.2		9.1		9.8		7.0		6.9		2.6		2.4		0.3	
2001	9.2		11.0		10.8		6.8		4.3		4.1		2.6		1.4	
2002	7.4		6.3		9.3		8.3		4.4		2.6		2.4		—	
2003	4.5		5.3		5.3		5.2		3.4		3.1		1.2		—	
2004	4.0		4.2		2.4		3.2		4.0		3.7		0.9		—	
2005	3.0		4.1		3.3		2.8		2.3		2.5		2.0		—	
2006	4.1		3.8		3.4		3.6		2.0		2.1		2.2		—	
2007	4.5		3.1		2.7		2.6		1.9		1.9		1.4		—	
2008	4.3		4.7		4.7		2.0		2.7		2.1		2.0		—	
2009	4.3		3.4		3.9		3.4		2.7		1.8		1.9		—	
2010	4.5		5.0		4.8		4.4		1.6		1.8		1.0		—	
2011	5.3		4.8		4.7		3.7		2.5		2.3		2.0		—	
2012	3.8		5.8		5.5		4.2		2.6		2.1		2.2		—	
2013	4.0		5.0		5.9		4.9		3.3		2.0		1.6		—	
2014	3.6	5.0	5.2	5.4	5.9	5.4	4.8	2.2	4.4	7.9	3.3	3.8	1.8	4.9	—	—
2015	—	3.6	—	5.2	—	4.2	—	4.8	—	4.5	—	3.5	—	2.6	—	—

Source. The Monitoring the Future study, the University of Michigan.

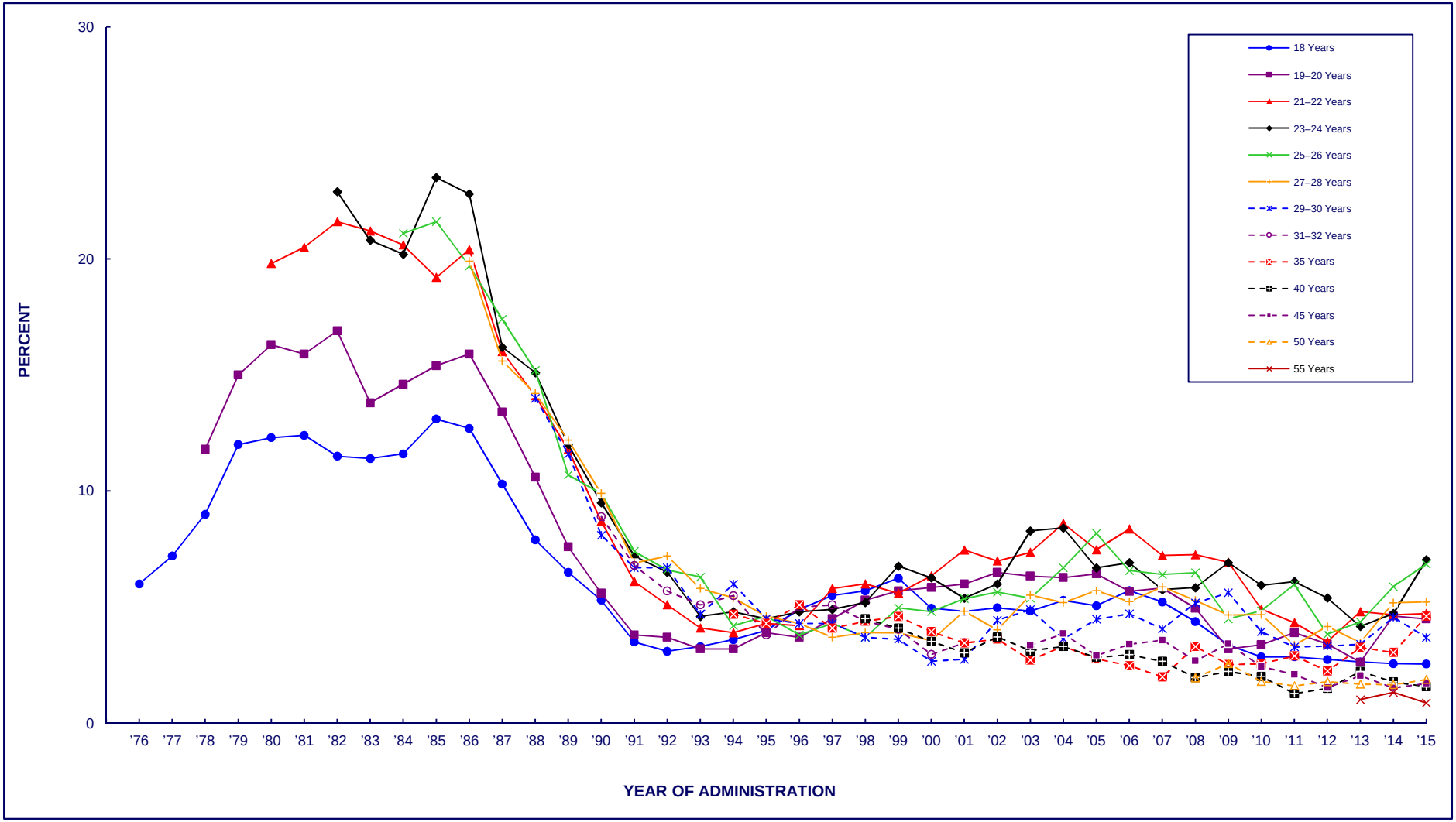
Notes. ' * ' indicates a percentage of less than 0.05%. ' — ' indicates data not available.

[a]Questions about use of ecstasy (MDMA) were not included in the questionnaires administered to the 35-, 40-, 45-, and 50-year-olds.

[b]Beginning in 2002, respondents were followed through age 30 instead of age 32 as in past years.

[c]In 2014, a version of the question was added to an additional form that included "molly" in the description. In 2015 the remaining forms were changed to this upda wording. Data for both versions of the question are included here.

FIGURE 5-9
COCAINE
Trends in Annual Prevalence
among Respondents of Modal Ages 18 through 55, by Age Group



(Figure continued on next page.)

FIGURE 5-9 (cont.)
COCAINE
Trends in Annual Prevalence
among Respondents of Modal Ages 18 through 55, by Age Group

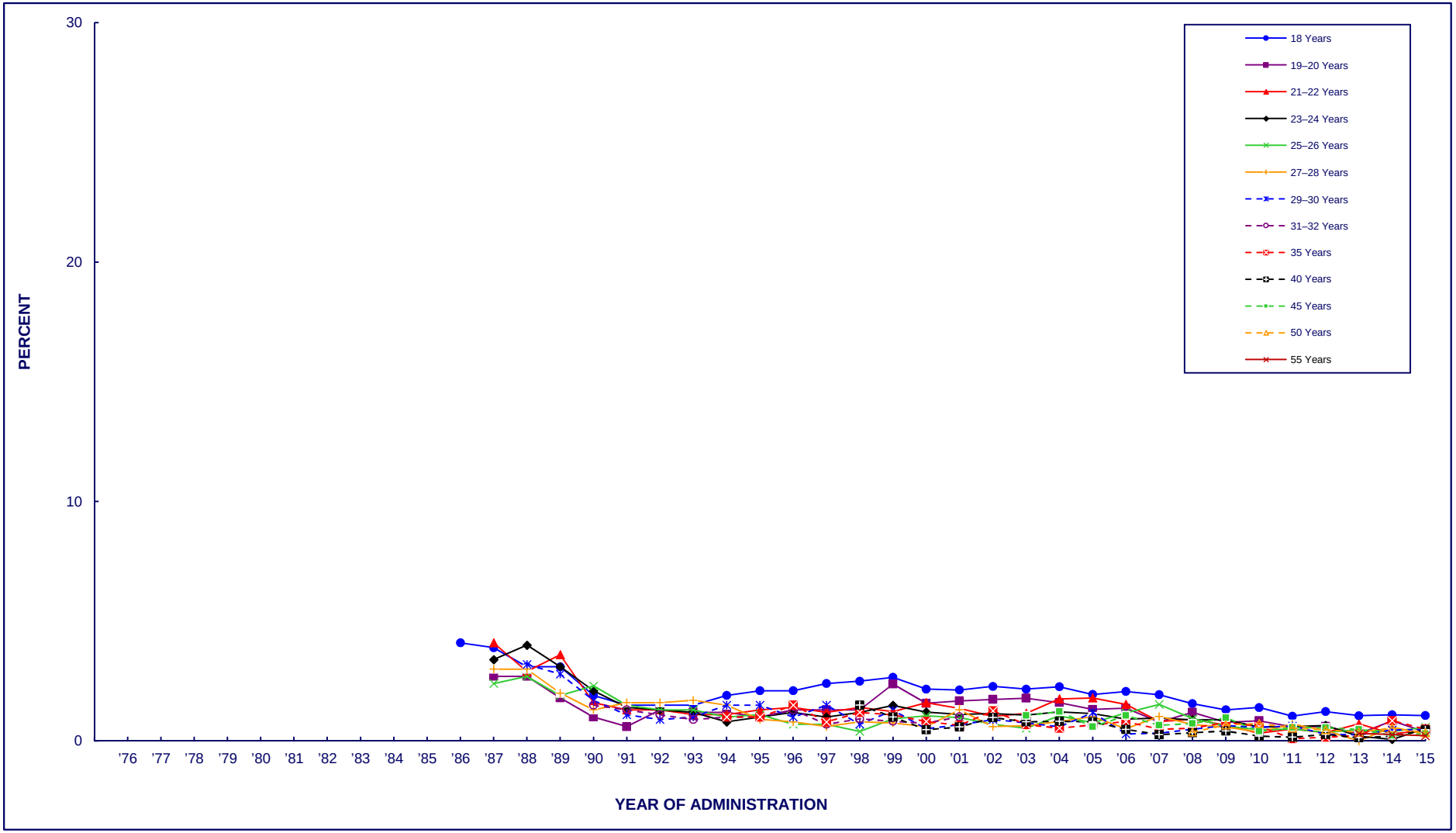
Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Ages 31–32 [a]	Age 35	Age 40	Age 45	Age 50	Age 55
1976	6.0												
1977	7.2												
1978	9.0	11.8											
1979	12.0	15.0											
1980	12.3	16.3	19.8										
1981	12.4	15.9	20.5										
1982	11.5	16.9	21.6	22.9									
1983	11.4	13.8	21.2	20.8									
1984	11.6	14.6	20.6	20.2	21.1								
1985	13.1	15.4	19.2	23.5	21.6								
1986	12.7	15.9	20.4	22.8	19.7	19.9							
1987	10.3	13.4	16.0	16.2	17.4	15.6							
1988	7.9	10.6	14.1	15.1	15.2	14.2	14.0						
1989	6.5	7.6	11.8	12.0	10.7	12.2	11.6						
1990	5.3	5.6	8.7	9.5	9.9	9.9	8.1	8.9					
1991	3.5	3.8	6.1	7.2	7.4	6.9	6.7	6.8					
1992	3.1	3.7	5.1	6.5	6.6	7.2	6.7	5.7					
1993	3.3	3.2	4.1	4.6	6.3	5.8	4.7	5.1					
1994	3.6	3.2	3.9	4.8	4.2	5.4	6.0	5.5	4.7				
1995	4.0	3.9	4.3	4.5	4.6	4.6	4.5	3.8	4.3				
1996	4.9	3.7	4.2	4.8	3.8	4.3	4.3	5.0	5.1				
1997	5.5	4.5	5.8	4.9	4.3	3.7	4.3	5.1	4.1				
1998	5.7	5.3	6.0	5.2	3.7	3.9	3.7	4.4	4.4	4.5			
1999	6.2	5.7	5.6	6.8	5.0	3.9	3.6	4.1	4.6	4.1			
2000	5.0	5.8	6.3	6.3	4.8	3.6	2.7	3.0	3.9	3.5			
2001	4.8	6.0	7.5	5.4	5.4	4.8	2.8	3.5	3.5	3.0			
2002	5.0	6.5	7.0	6.0	5.6	4.0	4.4	—	3.6	3.7			
2003	4.8	6.3	7.4	8.3	5.4	5.5	4.9	—	2.7	3.1	3.4		
2004	5.3	6.3	8.6	8.4	6.7	5.2	3.6	—	3.3	3.3	3.9		
2005	5.1	6.4	7.5	6.7	8.2	5.7	4.5	—	2.8	2.8	2.9		
2006	5.7	5.7	8.4	6.9	6.6	5.2	4.7	—	2.5	3.0	3.4		
2007	5.2	5.8	7.2	5.8	6.4	5.9	4.1	—	2.0	2.7	3.6		
2008	4.4	5.0	7.3	5.8	6.5	5.3	5.2	—	3.3	2.0	2.7	2.0	
2009	3.4	3.2	6.9	6.9	4.5	4.7	5.6	—	2.5	2.2	3.4	2.6	
2010	2.9	3.4	4.9	5.9	4.8	4.7	4.0	—	2.6	2.0	2.4	1.8	
2011	2.9	3.9	4.3	6.1	6.0	3.4	3.3	—	2.9	1.3	2.1	1.6	
2012	2.7	3.4	3.5	5.4	3.8	4.2	3.3	—	2.3	1.5	1.5	1.8	
2013	2.6	2.6	4.8	4.2	4.4	3.5	3.4	—	3.3	2.2	2.0	1.7	1.0
2014	2.6	4.6	4.7	4.7	5.9	5.2	4.6	—	3.1	1.8	1.5	1.7	1.3
2015	2.5	4.5	4.7	7.0	6.9	5.2	3.7	—	4.6	1.6	1.7	1.9	0.9

Source. The Monitoring the Future study, the University of Michigan.

Notes. ' — ' indicates data not available.

[a]Beginning in 2002, respondents were followed through age 30 instead of age 32 as in past years.

FIGURE 5-10
CRACK COCAINE
Trends in Annual Prevalence
among Respondents of Modal Ages 18 through 55, by Age Group



(Figure continued on next page.)

FIGURE 5-10 (cont.)
CRACK COCAINE
Trends in Annual Prevalence
among Respondents of Modal Ages 18 through 55, by Age Group

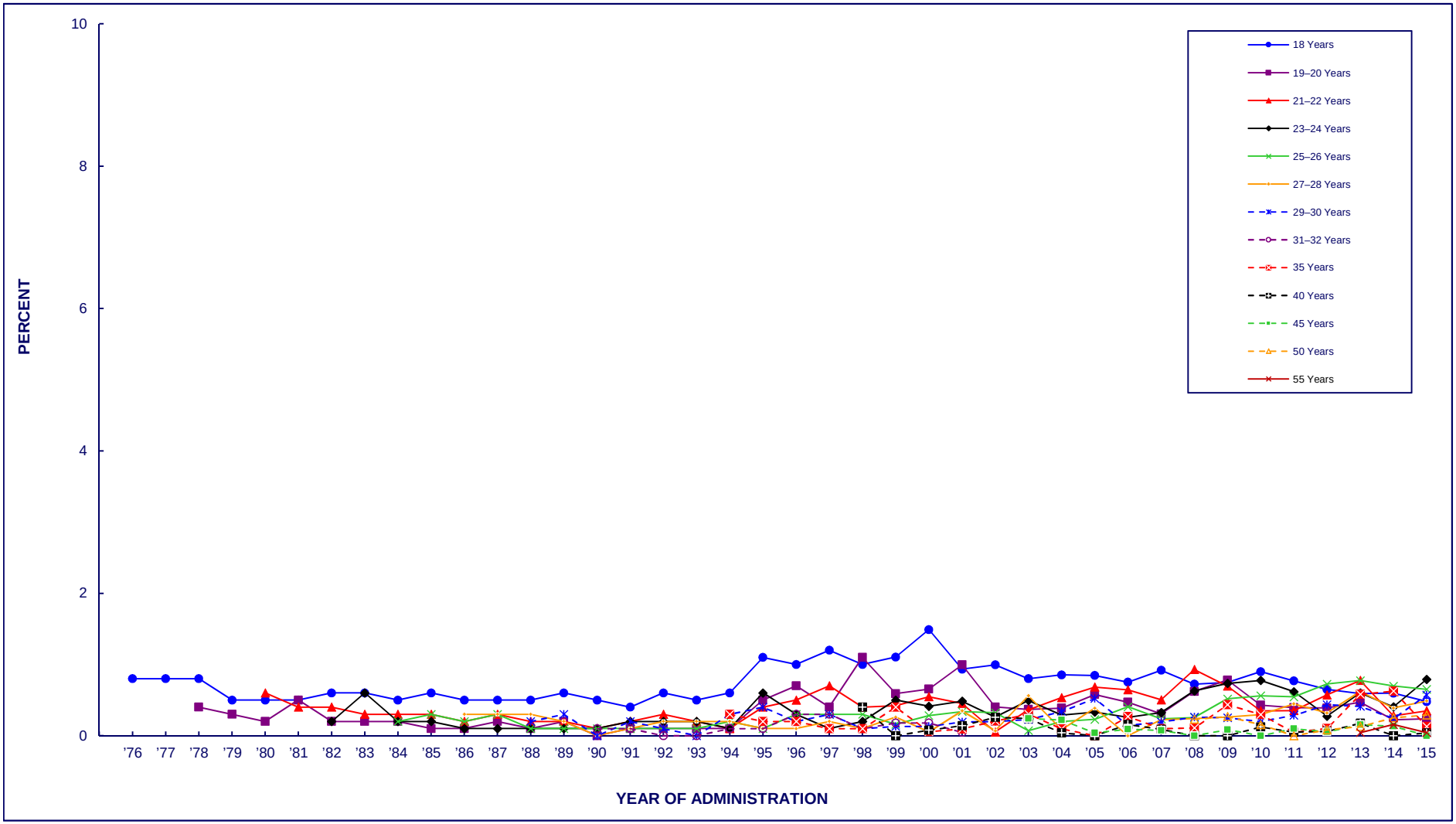
Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Ages 31–32 [a]	Age 35	Age 40	Age 45	Age 50	Age 55
1976													
1977													
1978													
1979													
1980													
1981													
1982													
1983													
1984													
1985													
1986	4.1												
1987	3.9	2.7	4.1	3.4	2.4	3.0							
1988	3.1	2.7	2.9	4.0	2.7	3.0	3.2						
1989	3.1	1.8	3.6	3.1	1.9	2.0	2.8						
1990	1.9	1.0	1.6	2.1	2.3	1.3	1.7	1.5					
1991	1.5	0.6	1.3	1.4	1.5	1.6	1.1	1.3					
1992	1.5	1.3	1.3	1.3	1.3	1.6	0.9	1.1					
1993	1.5	1.2	1.1	1.2	1.3	1.7	1.0	0.9					
1994	1.9	1.2	1.1	0.8	1.0	1.5	1.5	1.0	1.0				
1995	2.1	1.0	1.3	1.0	1.1	0.9	1.5	1.0	1.0				
1996	2.1	1.3	1.4	1.2	0.7	0.8	1.0	1.3	1.5				
1997	2.4	1.3	1.2	1.0	0.7	0.6	1.5	0.7	0.8				
1998	2.5	1.3	1.4	1.2	0.4	0.8	0.7	0.9	1.2	1.5			
1999	2.7	2.4	1.2	1.5	0.9	0.8	1.3	0.8	1.1	1.0			
2000	2.2	1.6	1.6	1.2	1.1	0.6	0.5	0.7	0.8	0.5			
2001	2.1	1.7	1.4	1.1	1.0	1.3	0.7	1.0	0.7	0.6			
2002	2.3	1.7	1.0	1.1	0.7	0.6	0.9	—	1.3	1.0			
2003	2.2	1.8	1.2	1.1	0.5	0.6	0.8	—	0.7	0.8	1.1		
2004	2.3	1.6	1.8	1.2	1.1	0.8	0.6	—	0.5	0.8	1.2		
2005	1.9	1.3	1.8	1.1	0.8	1.0	1.2	—	0.7	0.8	0.6		
2006	2.1	1.4	1.5	0.9	1.2	0.5	0.3	—	0.8	0.5	1.1		
2007	1.9	0.8	0.8	1.0	1.5	1.0	0.3	—	0.5	0.3	0.7		
2008	1.6	1.2	0.9	0.9	0.9	0.7	0.5	—	0.5	0.4	0.7	0.4	
2009	1.3	0.8	0.7	0.9	0.6	0.6	0.7	—	0.8	0.4	1.0	0.7	
2010	1.4	0.8	0.3	0.6	0.5	0.4	0.6	—	0.6	0.2	0.4	0.7	
2011	1.0	0.6	0.5	0.6	0.5	0.7	0.6	—	0.1	0.2	0.6	0.5	
2012	1.2	0.6	0.3	0.6	0.4	0.4	0.3	—	0.2	0.3	0.6	0.5	
2013	1.1	0.3	0.7	0.2	0.5	*	0.3	—	0.2	0.1	0.5	0.4	0.3
2014	1.1	0.8	0.3	0.1	0.4	0.6	0.5	—	0.9	0.2	0.2	0.5	0.3
2015	1.1	0.4	0.4	0.5	0.6	0.3	0.5	—	0.5	0.5	0.3	0.3	0.2

Source. The Monitoring the Future study, the University of Michigan.

Notes. ' — ' indicates data not available.

[a]Beginning in 2002, respondents were followed through age 30 instead of age 32 as in past years.

FIGURE 5-11
HEROIN
Trends in Annual Prevalence
among Respondents of Modal Ages 18 through 55, by Age Group



(Figure continued on next page.)

FIGURE 5-11 (cont.)
HEROIN
Trends in Annual Prevalence
among Respondents of Modal Ages 18 through 55, by Age Group

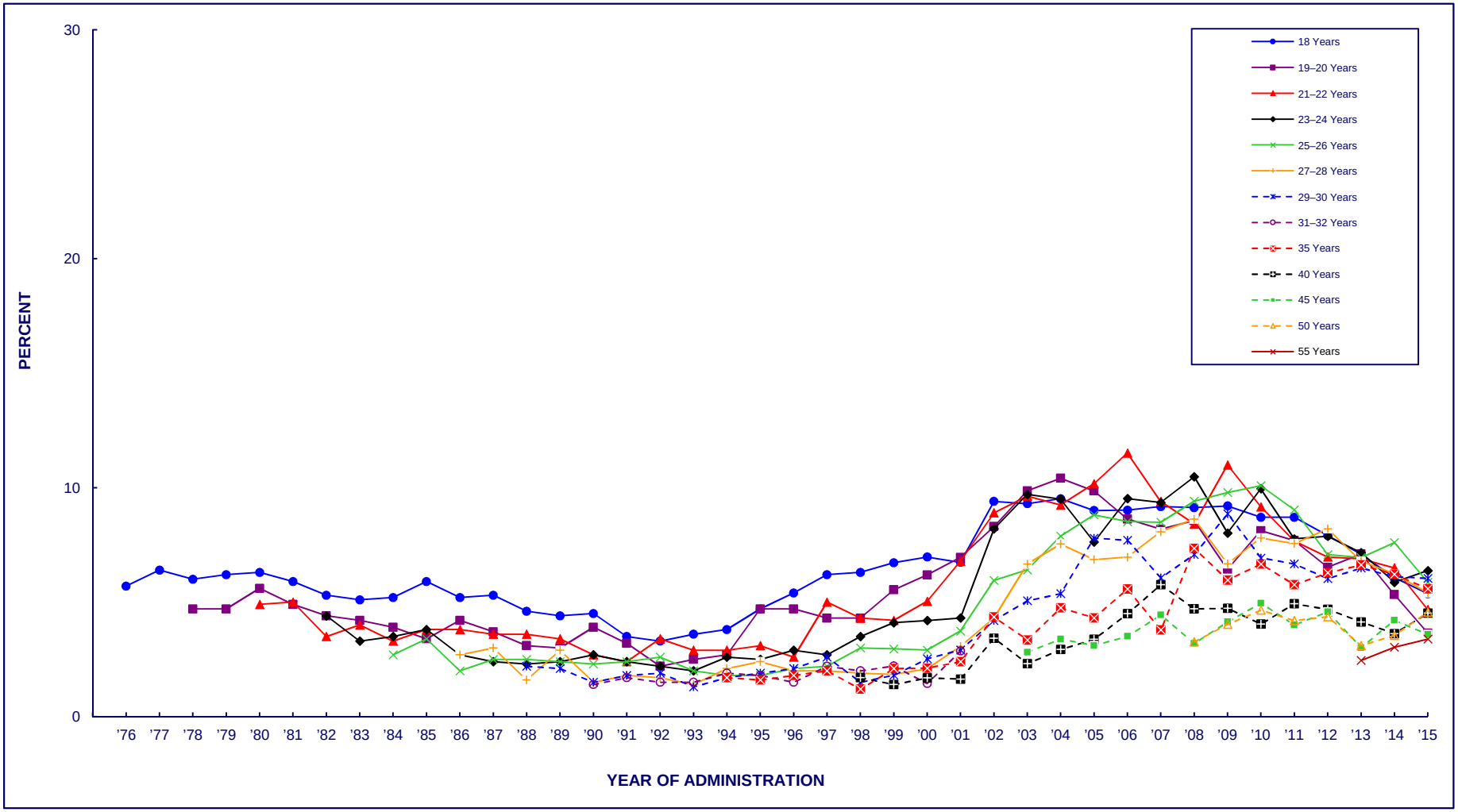
Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Ages 31–32 [a]	Age 35	Age 40	Age 45	Age 50	Age 55
1976	0.8												
1977	0.8												
1978	0.8	0.4											
1979	0.5	0.3											
1980	0.5	0.2	0.6										
1981	0.5	0.5	0.4										
1982	0.6	0.2	0.4	0.2									
1983	0.6	0.2	0.3	0.6									
1984	0.5	0.2	0.3	0.2	0.2								
1985	0.6	0.1	0.3	0.2	0.3								
1986	0.5	0.1	0.2	0.1	0.2	0.3							
1987	0.5	0.2	0.3	0.1	0.3	0.3							
1988	0.5	0.1	0.2	0.1	0.1	0.3	0.2						
1989	0.6	0.2	0.2	0.1	0.1	0.2	0.3						
1990	0.5	*	0.1	0.1	0.1	*	*	0.1					
1991	0.4	0.1	0.2	0.2	0.1	0.1	0.2	0.1					
1992	0.6	0.1	0.3	0.2	0.1	0.2	0.1	*					
1993	0.5	0.1	0.2	0.2	0.1	0.2	*	*					
1994	0.6	0.1	0.1	0.1	0.2	0.2	0.3	0.1	0.3				
1995	1.1	0.5	0.4	0.6	0.1	0.1	0.4	0.1	0.2				
1996	1.0	0.7	0.5	0.3	0.3	0.1	0.2	0.3	0.2				
1997	1.2	0.4	0.7	0.1	0.3	0.2	0.3	0.3	0.1				
1998	1.0	1.1	0.4	0.2	0.3	0.1	0.1	0.1	0.1	0.4			
1999	1.1	0.6	0.4	0.5	0.2	0.3	0.1	0.2	0.4	*			
2000	1.5	0.7	0.5	0.4	0.3	0.1	0.1	0.2	0.1	0.1			
2001	0.9	1.0	0.5	0.5	0.3	0.3	0.2	0.0	0.1	0.1			
2002	1.0	0.4	0.1	0.3	0.3	0.1	0.2	—	0.2	0.3			
2003	0.8	0.4	0.4	0.5	0.1	0.6	0.2	—	0.3	0.2	0.2		
2004	0.9	0.4	0.5	0.3	0.2	0.1	0.3	—	0.1	*	0.2		
2005	0.8	0.6	0.7	0.3	0.2	0.4	0.5	—	*	*	*		
2006	0.8	0.5	0.6	0.3	0.4	*	0.1	—	0.3	0.2	0.1		
2007	0.9	0.3	0.5	0.3	0.2	0.2	0.2	—	0.1	0.1	0.1		
2008	0.7	0.6	0.9	0.6	0.3	0.2	0.3	—	0.1	*	*	0.2	
2009	0.7	0.8	0.7	0.7	0.5	0.3	0.3	—	0.4	*	0.1	0.3	
2010	0.9	0.4	0.3	0.8	0.6	0.3	0.2	—	0.3	0.1	*	0.2	
2011	0.8	0.4	0.4	0.6	0.5	0.4	0.3	—	0.0	0.1	0.1	*	
2012	0.6	0.4	0.6	0.3	0.7	0.3	0.4	—	0.1	0.1	0.1	0.1	
2013	0.6	0.5	0.8	0.6	0.8	0.6	0.4	—	0.6	0.2	0.2	0.1	*
2014	0.6	0.2	0.3	0.4	0.7	0.4	0.2	—	0.6	*	0.1	0.3	0.2
2015	0.5	0.2	0.3	0.8	0.7	0.5	0.6	—	0.1	*	*	0.3	*

Source. The Monitoring the Future study, the University of Michigan.

Notes. ' * ' indicates a percentage of less than 0.05%. ' — ' indicates data not available.

[a]Beginning in 2002, respondents were followed through age 30 instead of age 32 as in past years.

FIGURE 5-12
NARCOTICS OTHER THAN HEROIN [a]
Trends in Annual Prevalence
among Respondents of Modal Ages 18 through 55, by Age Group



(Figure continued on next page.)

FIGURE 5-12 (cont.)
NARCOTICS OTHER THAN HEROIN [a]
Trends in Annual Prevalence
among Respondents of Modal Ages 18 through 55, by Age Group

Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Ages 31–32 [b]	Age 35	Age 40	Age 45	Age 50	Age 55
1976	5.7												
1977	6.4												
1978	6.0	4.7											
1979	6.2	4.7											
1980	6.3	5.6	4.9										
1981	5.9	4.9	5.0										
1982	5.3	4.4	3.5	4.4									
1983	5.1	4.2	4.0	3.3									
1984	5.2	3.9	3.3	3.5	2.7								
1985	5.9	3.4	3.8	3.8	3.4								
1986	5.2	4.2	3.8	2.7	2.0	2.7							
1987	5.3	3.7	3.6	2.4	2.5	3.0							
1988	4.6	3.1	3.6	2.3	2.5	1.6	2.2						
1989	4.4	3.0	3.4	2.4	2.4	2.9	2.1						
1990	4.5	3.9	2.7	2.7	2.3	1.5	1.5	1.4					
1991	3.5	3.2	2.4	2.4	2.4	1.8	1.8	1.7					
1992	3.3	2.2	3.4	2.2	2.6	1.7	1.9	1.5					
1993	3.6	2.5	2.9	2.0	2.0	1.4	1.3	1.5					
1994	3.8	2.7	2.9	2.6	1.8	2.1	1.7	1.9	1.7				
1995	4.7	4.7	3.1	2.5	1.8	2.4	1.9	1.8	1.6				
1996	5.4	4.7	2.6	2.9	2.1	2.0	2.1	1.5	1.8				
1997	6.2	4.3	5.0	2.7	2.2	2.0	2.6	2.2	2.0				
1998	6.3	4.3	4.3	3.5	3.0	1.9	1.5	2.0	1.2	1.7			
1999	6.7	5.5	4.2	4.1	3.0	1.8	1.8	2.2	2.1	1.4			
2000	7.0	6.2	5.0	4.2	2.9	2.1	2.5	1.4	2.1	1.7			
2001	6.7	7.0	6.8	4.3	3.7	3.1	2.9	2.9	2.4	1.6			
2002	9.4	8.3	8.9	8.2	6.0	4.3	4.2	—	4.4	3.4			
2003	9.3	9.9	9.6	9.7	6.4	6.7	5.1	—	3.4	2.3	2.8		
2004	9.5	10.4	9.2	9.5	7.9	7.5	5.4	—	4.8	2.9	3.4		
2005	9.0	9.9	10.2	7.6	8.8	6.9	7.8	—	4.3	3.4	3.1		
2006	9.0	8.6	11.5	9.5	8.5	7.0	7.7	—	5.6	4.5	3.5		
2007	9.2	8.2	9.4	9.4	8.5	8.1	6.1	—	3.8	5.8	4.4		
2008	9.1	8.6	8.4	10.5	9.4	8.6	7.1	—	7.4	4.7	3.2	3.3	
2009	9.2	6.4	11.0	8.0	9.8	6.7	8.9	—	6.0	4.7	4.1	4.0	
2010	8.7	8.1	9.2	10.0	10.1	7.8	6.9	—	6.7	4.0	5.0	4.7	
2011	8.7	7.7	7.7	7.8	9.0	7.6	6.7	—	5.8	4.9	4.0	4.2	
2012	7.9	6.5	7.0	7.9	7.1	8.2	6.0	—	6.3	4.7	4.6	4.4	
2013	7.1	7.1	6.9	7.2	6.9	6.8	6.5	—	6.6	4.1	3.0	3.1	2.5
2014	6.1	5.3	6.5	5.9	7.6	6.2	6.1	—	6.2	3.6	4.2	3.5	3.0
2015	5.4	3.6	4.7	6.4	5.9	5.4	6.0	—	5.6	4.5	3.6	4.6	3.4

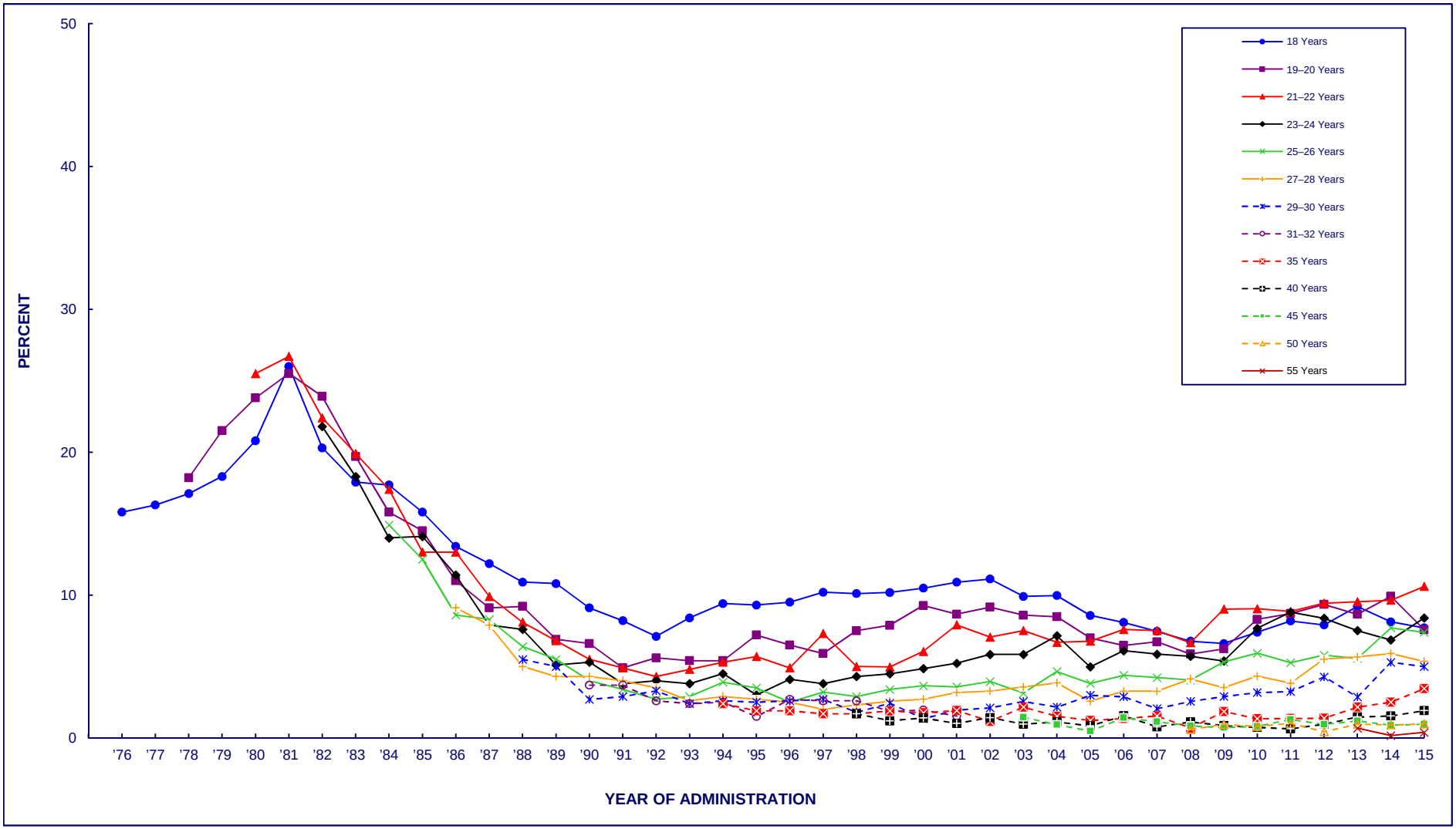
Source. The Monitoring the Future study, the University of Michigan.

Notes. ' — ' indicates data not available.

[a] In 2002 the question text was changed on half of the questionnaire forms for 18- to 30-year-olds. The list of examples of narcotics other than heroin was updated. Talwin, laudanum, and paregoric—all of which had negligible rates of use by 2001—were replaced by Vicodin, OxyContin, and Percocet. The 2001 data presented here are based on all forms. The 2002 data are based on the changed forms only. In 2003 the remaining forms were changed to the new wording. The data are based on all forms in 2003. Beginning in 2002 data were based on the changed question text for 35- and 40-year-olds.

[b] Beginning in 2002, respondents were followed through age 30 instead of age 32 as in past years.

FIGURE 5-13
AMPHETAMINES
Trends in Annual Prevalence
among Respondents of Modal Ages 18 through 55, by Age Group



(Figure continued on next page.)

FIGURE 5-13 (cont.)
AMPHETAMINES
Trends in Annual Prevalence
among Respondents of Modal Ages 18 through 55, by Age Group

Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Ages 31–32 [a]	Age 35	Age 40	Age 45	Age 50	Age 55
1976	15.8												
1977	16.3												
1978	17.1	18.2											
1979	18.3	21.5											
1980	20.8	23.8	25.5										
1981	26.0	25.5	26.7										
1982	20.3	23.9	22.4	21.8									
1983	17.9	19.7	19.9	18.3									
1984	17.7	15.8	17.4	14.0	14.9								
1985	15.8	14.5	13.0	14.1	12.5								
1986	13.4	11.0	13.0	11.4	8.6	9.1							
1987	12.2	9.1	9.9	7.9	8.3	7.9							
1988	10.9	9.2	8.1	7.6	6.4	5.0	5.5						
1989	10.8	6.9	6.8	5.1	5.5	4.3	5.0						
1990	9.1	6.6	5.5	5.3	4.0	4.3	2.7	3.7					
1991	8.2	4.9	4.9	3.8	3.4	4.0	2.9	3.7					
1992	7.1	5.6	4.3	4.0	2.7	3.5	3.3	2.6					
1993	8.4	5.4	4.8	3.8	2.9	2.6	2.4	2.4					
1994	9.4	5.4	5.3	4.5	3.9	2.9	2.6	2.5	2.4				
1995	9.3	7.2	5.7	3.0	3.5	2.7	2.5	1.5	1.9				
1996	9.5	6.5	4.9	4.1	2.5	2.5	2.6	2.7	1.9				
1997	10.2	5.9	7.3	3.8	3.2	2.0	2.7	2.6	1.7				
1998	10.1	7.5	5.0	4.3	2.9	2.3	1.8	2.6	1.7	1.7			
1999	10.2	7.9	5.0	4.5	3.4	2.6	2.4	1.9	1.9	1.2			
2000	10.5	9.3	6.0	4.8	3.6	2.7	1.4	1.9	1.8	1.4			
2001	10.9	8.7	7.9	5.2	3.6	3.2	1.9	1.5	1.9	1.0			
2002	11.1	9.1	7.1	5.8	3.9	3.3	2.1	—	1.2	1.4			
2003	9.9	8.6	7.5	5.8	3.1	3.6	2.6	—	2.2	1.0	1.4		
2004	10.0	8.5	6.7	7.1	4.6	3.9	2.2	—	1.5	1.1	0.9		
2005	8.6	7.0	6.8	5.0	3.8	2.6	3.0	—	1.2	0.8	0.5		
2006	8.1	6.5	7.6	6.1	4.4	3.3	2.9	—	1.4	1.6	1.4		
2007	7.5	6.7	7.5	5.9	4.2	3.3	2.1	—	1.5	0.8	1.1		
2008	6.8	5.9	6.7	5.7	4.0	4.1	2.6	—	0.7	1.1	0.9	0.6	
2009	6.6	6.2	9.0	5.4	5.3	3.5	2.9	—	1.9	0.9	0.7	1.0	
2010	7.4	8.3	9.0	7.7	5.9	4.3	3.2	—	1.3	0.7	0.8	0.8	
2011	8.2	8.7	8.8	8.8	5.3	3.8	3.2	—	1.4	0.6	1.3	1.0	
2012	7.9	9.3	9.4	8.4	5.8	5.5	4.3	—	1.4	1.0	1.0	0.4	
2013	9.2	8.6	9.5	7.5	5.6	5.7	2.9	—	2.2	1.5	1.2	1.0	0.7
2014	8.1	9.9	9.6	6.9	7.7	5.9	5.3	—	2.5	1.5	0.9	0.9	0.2
2015	7.7	7.6	10.6	8.4	7.4	5.4	5.0	—	3.5	1.9	1.0	1.0	0.4

Source. The Monitoring the Future study, the University of Michigan.

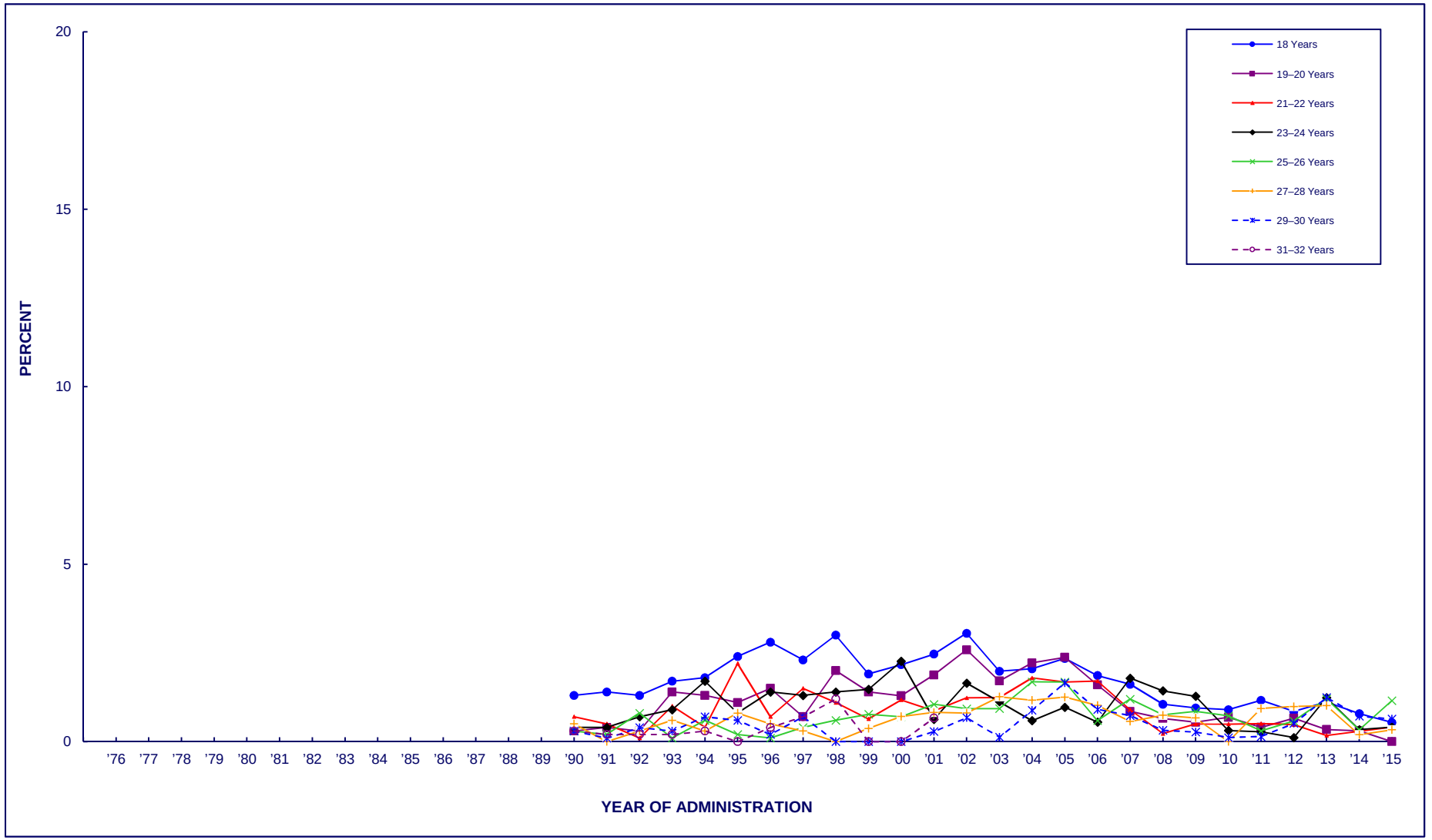
Notes. ' — ' indicates data not available.

[a]Beginning in 2002, respondents were followed through age 30 instead of age 32 as in past years.

FIGURE 5-14

CRYSTAL METHAMPHETAMINE (ICE)

Trends in Annual Prevalence among Respondents of Modal Ages 18 through 32, [a] by Age Group



(Figure continued on next page.)

FIGURE 5-14 (cont.)
CRYSTAL METHAMPHETAMINE (ICE)
Trends in Annual Prevalence among Respondents of Modal Ages 18 through 32, [a] by Age Group

Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Ages 31–32 [b]
1976								
1977								
1978								
1979								
1980								
1981								
1982								
1983								
1984								
1985								
1986								
1987								
1988								
1989								
1990	1.3	0.3	0.7	0.4	0.3	0.5	0.3	0.3
1991	1.4	0.4	0.5	0.4	0.2	*	0.1	0.2
1992	1.3	0.3	0.1	0.7	0.8	0.3	0.4	0.2
1993	1.7	1.4	1.0	0.9	0.1	0.6	0.3	0.2
1994	1.8	1.3	0.4	1.7	0.6	0.3	0.7	0.3
1995	2.4	1.1	2.2	0.8	0.2	0.8	0.6	*
1996	2.8	1.5	0.7	1.4	0.1	0.5	0.2	0.4
1997	2.3	0.7	1.5	1.3	0.4	0.3	0.7	0.7
1998	3.0	2.0	1.1	1.4	0.6	*	*	1.2
1999	1.9	1.4	0.6	1.5	0.8	0.4	*	*
2000	2.2	1.3	1.2	2.3	0.7	0.7	*	*
2001	2.5	1.9	0.9	0.6	1.1	0.8	0.3	0.7
2002	3.0	2.6	1.2	1.6	0.9	0.8	0.7	—
2003	3.0	2.6	1.2	1.6	0.9	0.8	0.7	—
2004	2.0	1.7	1.2	1.1	0.9	1.3	0.1	—
2005	2.3	2.4	1.7	1.0	1.7	1.3	1.7	—
2006	1.9	1.6	1.7	0.5	0.6	1.0	0.9	—
2007	1.6	0.9	0.9	1.8	1.2	0.6	0.7	—
2008	1.1	0.7	0.2	1.4	0.8	0.7	0.3	—
2009	0.9	0.5	0.5	1.3	0.8	0.7	0.3	—
2010	0.9	0.7	0.5	0.3	0.7	*	0.1	—
2011	1.2	0.4	0.5	0.3	0.3	0.9	0.1	—
2012	0.8	0.7	0.5	0.1	0.6	1.0	0.5	—
2013	1.1	0.3	0.2	1.2	1.2	1.0	1.2	—
2014	0.8	0.3	0.3	0.3	0.3	0.2	0.7	—
2015	0.5	*	0.4	0.4	1.2	0.3	0.6	—

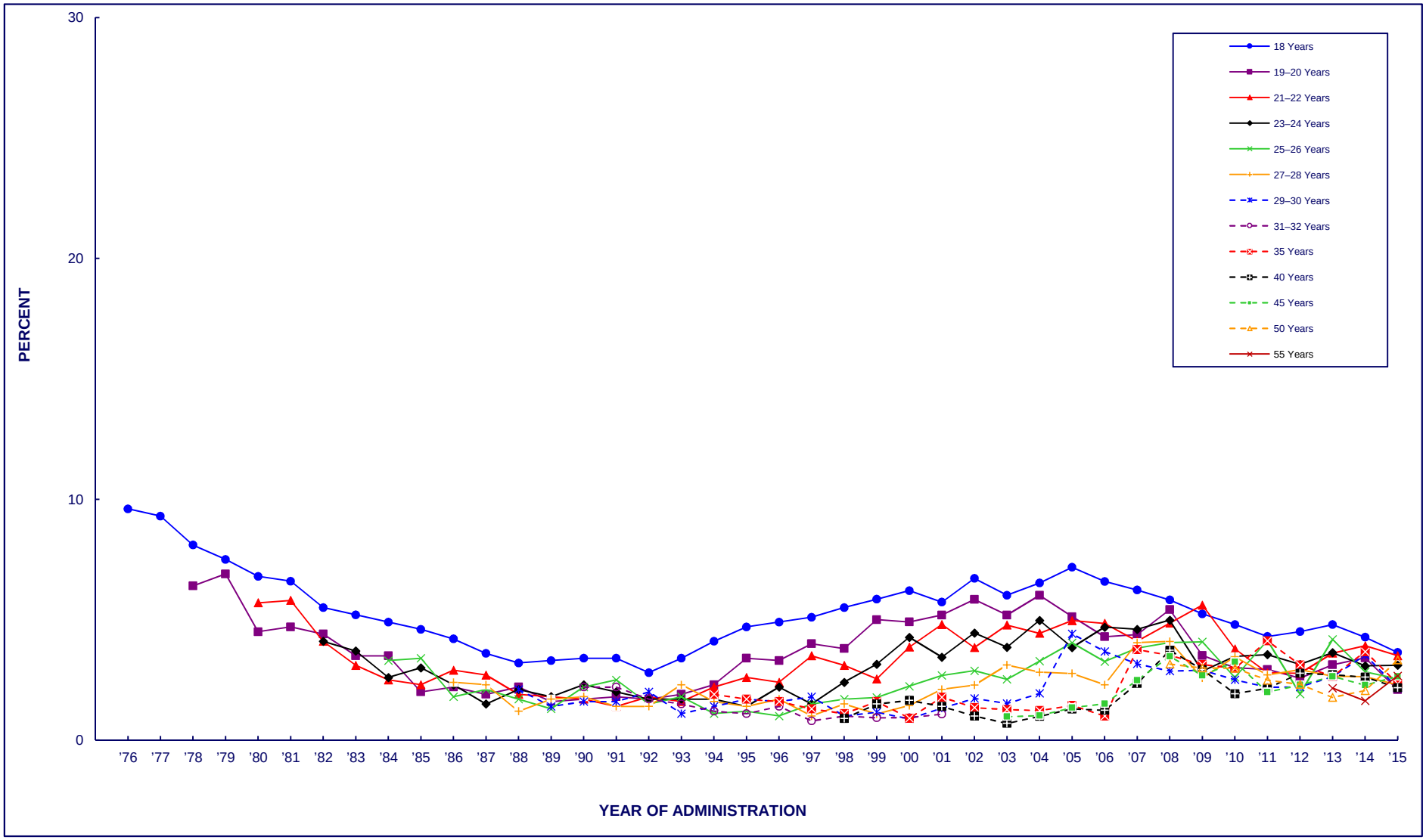
Source. The Monitoring the Future study, the University of Michigan.

Notes. ' * ' indicates a percentage of less than 0.05%. ' — ' indicates data not available.

[a]Questions about use of ecstasy (MDMA) were not included in the questionnaires administered to the 35-, 40-, 45-, and 50-year-olds.

[b]Beginning in 2002, respondents were followed through age 30 instead of age 32 as in past years.

FIGURE 5-15
SEDATIVES (BARBITURATES)
Trends in Annual Prevalence
among Respondents of Modal Ages 18 through 55, by Age Group



(Figure continued on next page.)

FIGURE 5-15 (cont.)
SEDATIVES (BARBITURATES)
Trends in Annual Prevalence
among Respondents of Modal Ages 18 through 55, by Age Group

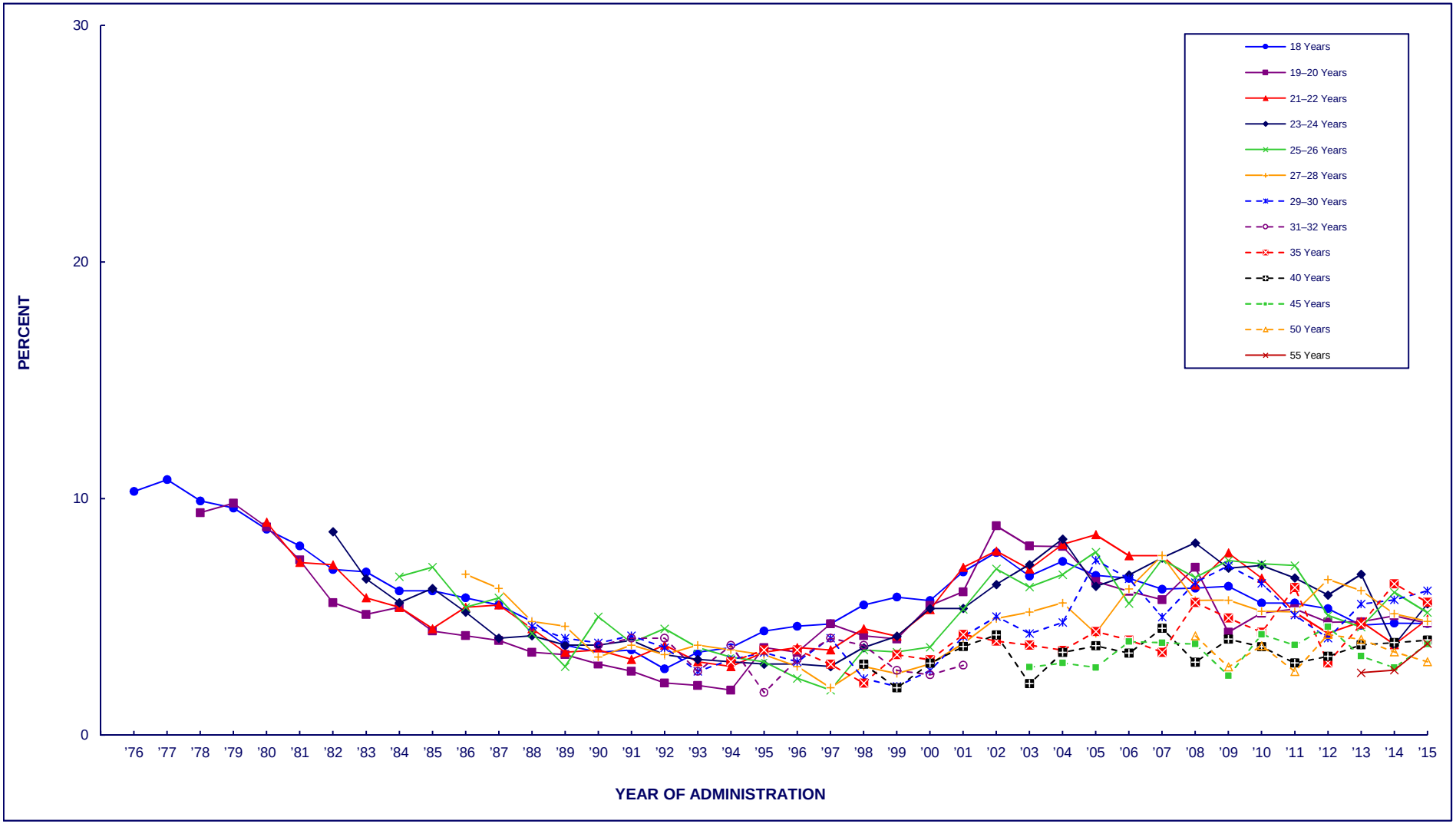
Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Ages 31–32 [a]	Age 35	Age 40	Age 45	Age 50	Age 55
1976	9.6												
1977	9.3												
1978	8.1	6.4											
1979	7.5	6.9											
1980	6.8	4.5	5.7										
1981	6.6	4.7	5.8										
1982	5.5	4.4	4.1	4.1									
1983	5.2	3.5	3.1	3.7									
1984	4.9	3.5	2.5	2.6	3.3								
1985	4.6	2.0	2.3	3.0	3.4								
1986	4.2	2.2	2.9	2.3	1.8	2.4							
1987	3.6	1.9	2.7	1.5	2.1	2.3							
1988	3.2	2.2	1.9	2.1	1.7	1.2	2.1						
1989	3.3	1.6	1.8	1.8	1.3	1.7	1.4						
1990	3.4	1.7	1.7	2.3	2.2	1.8	1.6	2.2					
1991	3.4	1.8	1.4	2.0	2.5	1.4	1.6	2.2					
1992	2.8	1.7	1.8	1.7	1.5	1.4	2.0	1.7					
1993	3.4	1.9	1.6	1.7	1.8	2.3	1.1	1.5					
1994	4.1	2.3	2.2	1.7	1.1	1.6	1.4	1.2	1.9				
1995	4.7	3.4	2.6	1.4	1.2	1.4	1.7	1.1	1.7				
1996	4.9	3.3	2.4	2.2	1.0	1.7	1.6	1.4	1.6				
1997	5.1	4.0	3.5	1.5	1.5	1.0	1.8	0.8	1.3				
1998	5.5	3.8	3.1	2.4	1.7	1.5	1.0	1.0	1.1	0.9			
1999	5.8	5.0	2.5	3.2	1.8	1.1	1.2	0.9	1.6	1.5			
2000	6.2	4.9	3.9	4.3	2.2	1.4	0.9	0.9	0.9	1.6			
2001	5.7	5.2	4.8	3.4	2.7	2.1	1.3	1.1	1.8	1.4			
2002	6.7	5.8	3.8	4.4	2.9	2.3	1.7	—	1.4	1.0			
2003	6.0	5.2	4.8	3.9	2.5	3.1	1.5	—	1.3	0.7	1.0		
2004	6.5	6.0	4.4	5.0	3.3	2.8	1.9	—	1.2	1.0	1.0		
2005	7.2	5.1	5.0	3.8	4.0	2.8	4.4	—	1.4	1.3	1.4		
2006	6.6	4.3	4.8	4.7	3.3	2.3	3.7	—	1.0	1.2	1.5		
2007	6.2	4.4	4.1	4.6	3.8	4.0	3.2	—	3.8	2.4	2.5		
2008	5.8	5.4	4.9	5.0	4.0	4.1	2.9	—	3.5	3.7	3.5	3.2	
2009	5.2	3.5	5.6	2.9	4.1	2.6	2.9	—	3.1	2.9	2.7	3.0	
2010	4.8	3.0	3.8	3.5	2.6	3.5	2.5	—	3.0	1.9	3.2	3.0	
2011	4.3	2.9	2.8	3.5	4.1	2.7	2.2	—	4.1	2.2	2.0	2.5	
2012	4.5	2.6	2.8	3.1	1.9	2.9	2.2	—	3.1	2.8	2.3	2.3	
2013	4.8	3.1	3.6	3.6	4.2	2.7	2.6	—	2.6	2.7	2.7	1.8	2.2
2014	4.3	3.4	3.9	3.1	2.8	2.6	3.5	—	3.7	2.6	2.3	2.1	1.6
2015	3.6	2.1	3.5	3.1	2.5	2.3	2.2	—	2.3	2.2	2.7	3.3	2.7

Source. The Monitoring the Future study, the University of Michigan.

Notes. ' — ' indicates data not available.

[a] Beginning in 2002, respondents were followed through age 30 instead of age 32 as in past years.

FIGURE 5-16
TRANQUILIZERS
Trends in Annual Prevalence
among Respondents of Modal Ages 18 through 55, by Age Group



(Figure continued on next page.)

FIGURE 5-16 (cont.)
TRANQUILIZERS
Trends in Annual Prevalence
among Respondents of Modal Ages 18 through 55, by Age Group

Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Ages 31–32 [a]	Age 35	Age 40	Age 45	Age 50	Age 55
1976	10.3												
1977	10.8												
1978	9.9	9.4											
1979	9.6	9.8											
1980	8.7	8.8	9.0										
1981	8.0	7.4	7.3										
1982	7.0	5.6	7.2	8.6									
1983	6.9	5.1	5.8	6.6									
1984	6.1	5.4	5.4	5.6	6.7								
1985	6.1	4.4	4.5	6.2	7.1								
1986	5.8	4.2	5.4	5.2	5.4	6.8							
1987	5.5	4.0	5.5	4.1	5.8	6.2							
1988	4.8	3.5	4.5	4.2	4.3	4.8	4.6						
1989	3.8	3.4	3.5	3.8	2.9	4.6	4.1						
1990	3.5	3.0	3.6	3.8	5.0	3.3	3.9	3.8					
1991	3.6	2.7	3.2	4.0	3.9	3.8	4.2	4.1					
1992	2.8	2.2	3.8	3.4	4.5	3.4	3.7	4.1					
1993	3.5	2.1	3.1	3.2	3.7	3.8	2.7	2.7					
1994	3.7	1.9	2.9	3.1	3.3	3.6	3.2	3.8	3.1				
1995	4.4	3.7	3.5	3.0	3.1	3.4	3.5	1.8	3.6				
1996	4.6	3.5	3.7	3.0	2.4	2.9	3.1	3.2	3.6				
1997	4.7	4.7	3.6	2.9	1.9	2.0	4.1	4.1	3.0				
1998	5.5	4.2	4.5	3.7	3.6	2.9	2.4	3.8	2.2	3.0			
1999	5.8	4.1	4.2	4.2	3.5	2.6	2.1	2.7	3.4	2.0			
2000	5.7	5.5	5.3	5.3	3.7	3.0	2.7	2.6	3.2	3.0			
2001	6.9	6.1	7.1	5.4	5.3	3.9	4.2	3.0	4.3	3.7			
2002	7.7	8.8	7.8	6.4	7.0	4.9	5.0	—	4.0	4.2			
2003	6.7	8.0	7.0	7.2	6.3	5.2	4.3	—	3.8	2.2	2.9		
2004	7.3	8.0	8.1	8.3	6.8	5.6	4.8	—	3.6	3.5	3.1		
2005	6.8	6.5	8.5	6.3	7.7	4.3	7.4	—	4.4	3.8	2.9		
2006	6.6	6.1	7.6	6.8	5.6	6.2	6.6	—	4.0	3.5	4.0		
2007	6.2	5.7	7.6	7.5	7.4	7.6	5.0	—	3.5	4.5	3.9		
2008	6.2	7.1	6.3	8.1	6.7	5.7	6.5	—	5.6	3.1	3.8	4.2	
2009	6.3	4.3	7.7	7.1	7.4	5.7	7.2	—	5.0	4.1	2.5	2.9	
2010	5.6	5.2	6.6	7.2	7.2	5.2	6.4	—	4.4	3.7	4.3	3.8	
2011	5.6	5.3	5.2	6.6	7.2	5.2	5.1	—	6.2	3.0	3.8	2.7	
2012	5.3	4.8	4.3	5.9	5.1	6.6	4.1	—	3.1	3.3	4.6	4.3	
2013	4.6	4.8	4.8	6.8	4.6	6.1	5.5	—	4.7	3.8	3.3	4.1	2.6
2014	4.7	5.0	3.8	3.8	6.0	5.1	5.7	—	6.4	3.9	2.9	3.5	2.7
2015	4.7	4.7	4.9	5.6	5.2	4.8	6.1	—	5.6	4.0	3.8	3.1	3.9

Source. The Monitoring the Future study, the University of Michigan.

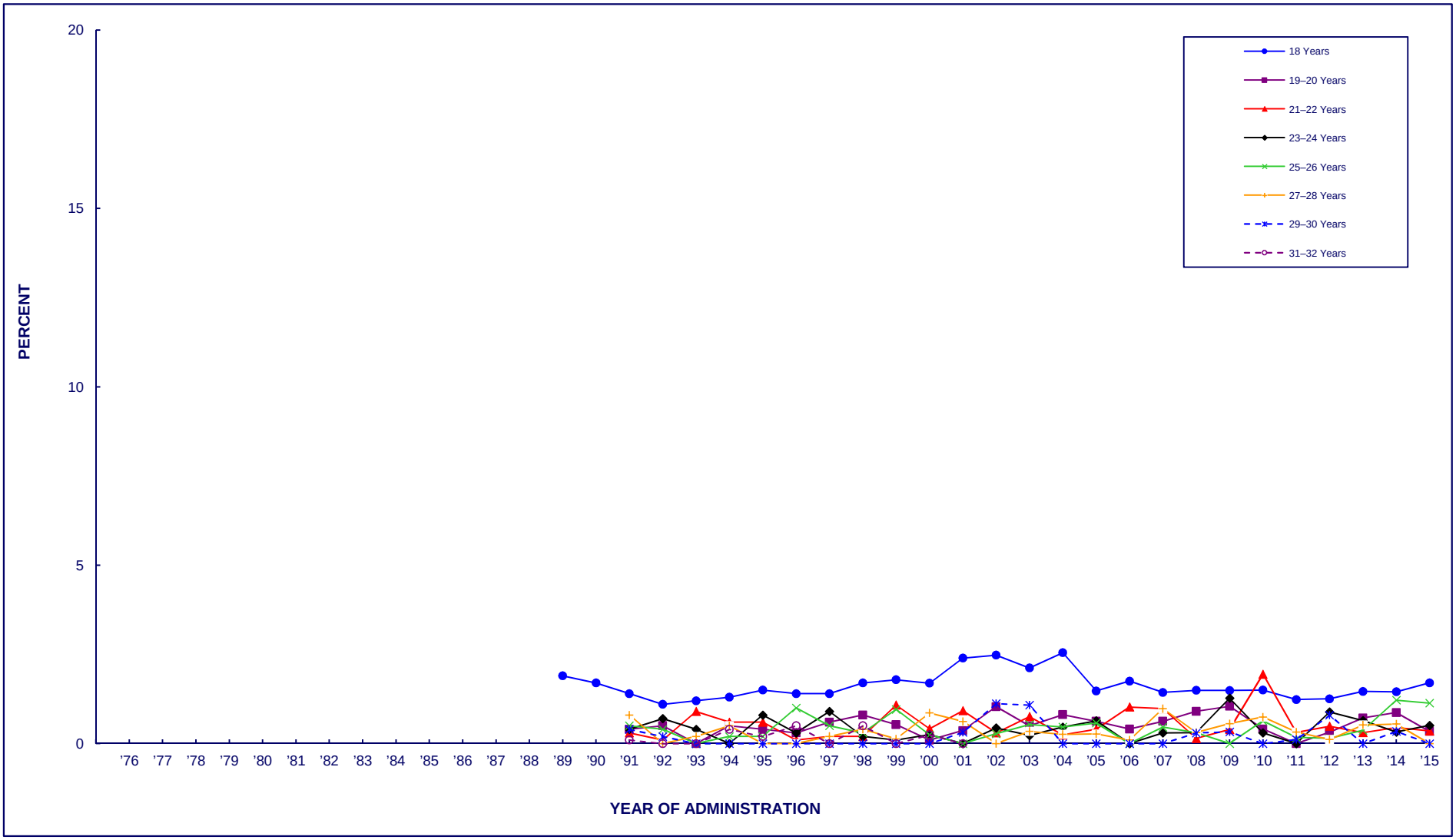
Notes. ' — ' indicates data not available.

[a]Beginning in 2002, respondents were followed through age 30 instead of age 32 as in past years.

FIGURE 5-17

STEROIDS

Trends in Annual Prevalence among Respondents of Modal Ages 18 through 32, [a] by Age Group



(Figure continued on next page.)

FIGURE 5-17 (cont.)
STEROIDS
Trends in Annual Prevalence among Respondents of Modal Ages 18 through 32, [a] by Age Group

Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Ages 31–32 [b]
1976								
1977								
1978								
1979								
1980								
1981								
1982								
1983								
1984								
1985								
1986								
1987								
1988								
1989	1.9							
1990	1.7							
1991	1.4	0.4	0.3	0.4	0.5	0.8	0.4	0.1
1992	1.1	0.5	0.1	0.7	0.4	*	0.2	*
1993	1.2	*	0.9	0.4	*	0.2	*	*
1994	1.3	0.5	0.6	*	0.2	0.5	*	0.4
1995	1.5	0.4	0.6	0.8	0.2	*	*	0.2
1996	1.4	0.3	0.1	0.3	1.0	*	*	0.5
1997	1.4	0.6	0.2	0.9	0.5	0.2	*	*
1998	1.7	0.8	0.2	0.2	0.3	0.4	*	0.5
1999	1.8	0.5	1.1	0.1	1.0	0.1	*	*
2000	1.7	0.1	0.4	0.3	0.2	0.9	*	0.2
2001	2.4	0.4	0.9	*	*	0.6	0.3	*
2002	2.5	1.0	0.3	0.4	0.3	*	1.1	—
2003	2.1	0.5	0.8	0.2	0.5	0.3	1.1	—
2004	2.5	0.8	0.2	0.5	0.5	0.3	*	—
2005	1.5	0.6	0.4	0.6	0.6	0.3	*	—
2006	1.8	0.4	1.0	*	*	0.1	*	—
2007	1.4	0.6	1.0	0.3	0.5	1.0	*	—
2008	1.5	0.9	0.1	0.3	0.3	0.3	0.3	—
2009	1.5	1.0	0.4	1.3	*	0.6	0.3	—
2010	1.5	0.4	1.9	0.3	0.6	0.7	*	—
2011	1.2	*	0.3	*	0.2	0.3	0.1	—
2012	1.3	0.3	0.5	0.9	0.1	0.1	0.8	—
2013	1.5	0.7	0.3	0.6	0.4	0.5	*	—
2014	1.5	0.9	0.5	0.3	1.2	0.5	0.3	—
2015	1.7	0.3	0.4	0.5	1.1	*	*	—

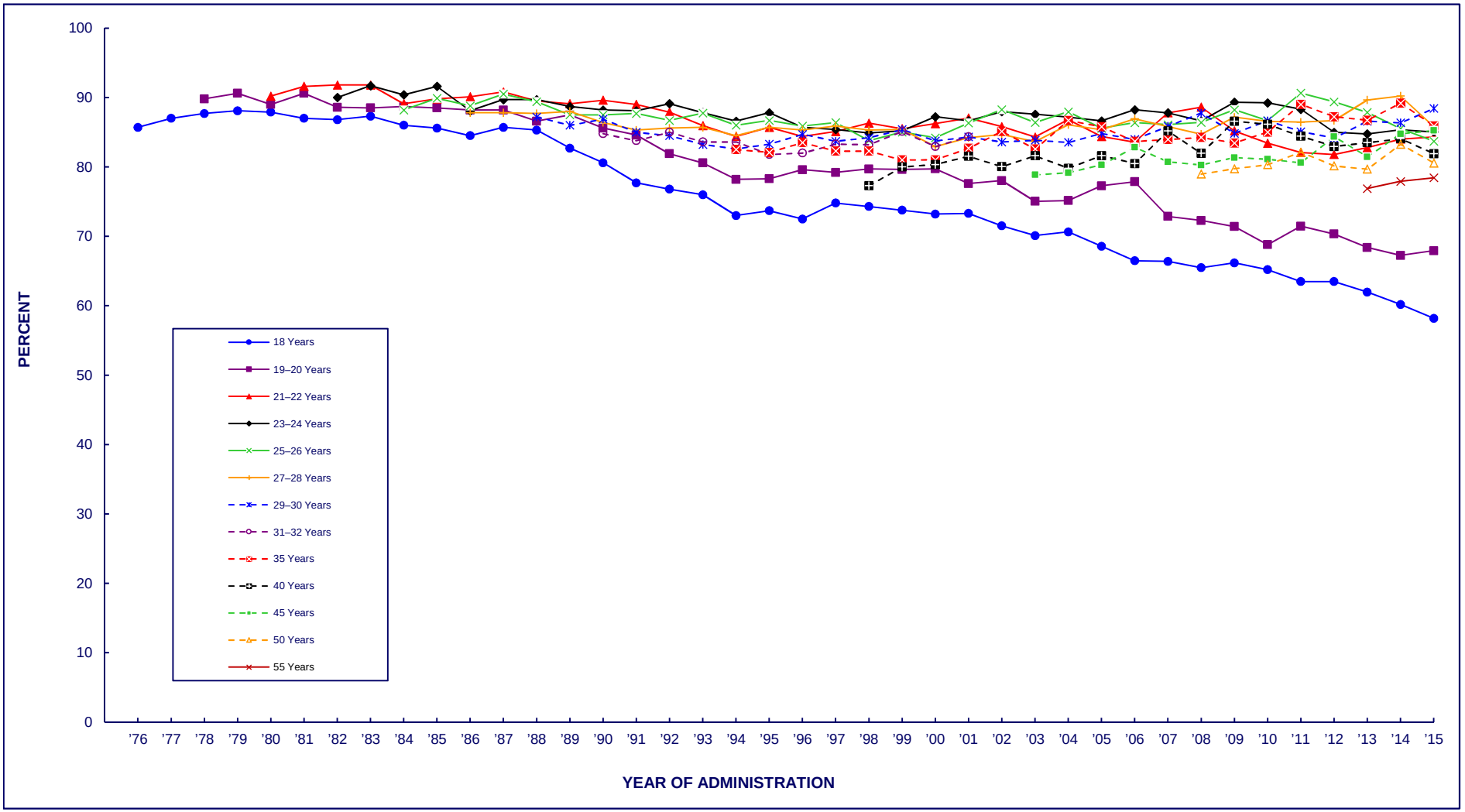
Source. The Monitoring the Future study, the University of Michigan.

Notes. ' * ' indicates a percentage of less than 0.05%. ' — ' indicates data not available.

[a]Questions about the use of steroids were not included in the questionnaires administered to the 35-, 40-, 45-, and 50-year-olds.

[b]Beginning in 2002, respondents were followed through age 30 instead of age 32 as in past years.

FIGURE 5-18a
ALCOHOL
Trends in Annual Prevalence
among Respondents of Modal Ages 18 through 55, by Age Group



(Figure continued on next page.)

FIGURE 5-18a (cont.)
ALCOHOL
Trends in Annual Prevalence
among Respondents of Modal Ages 18 through 55, by Age Group

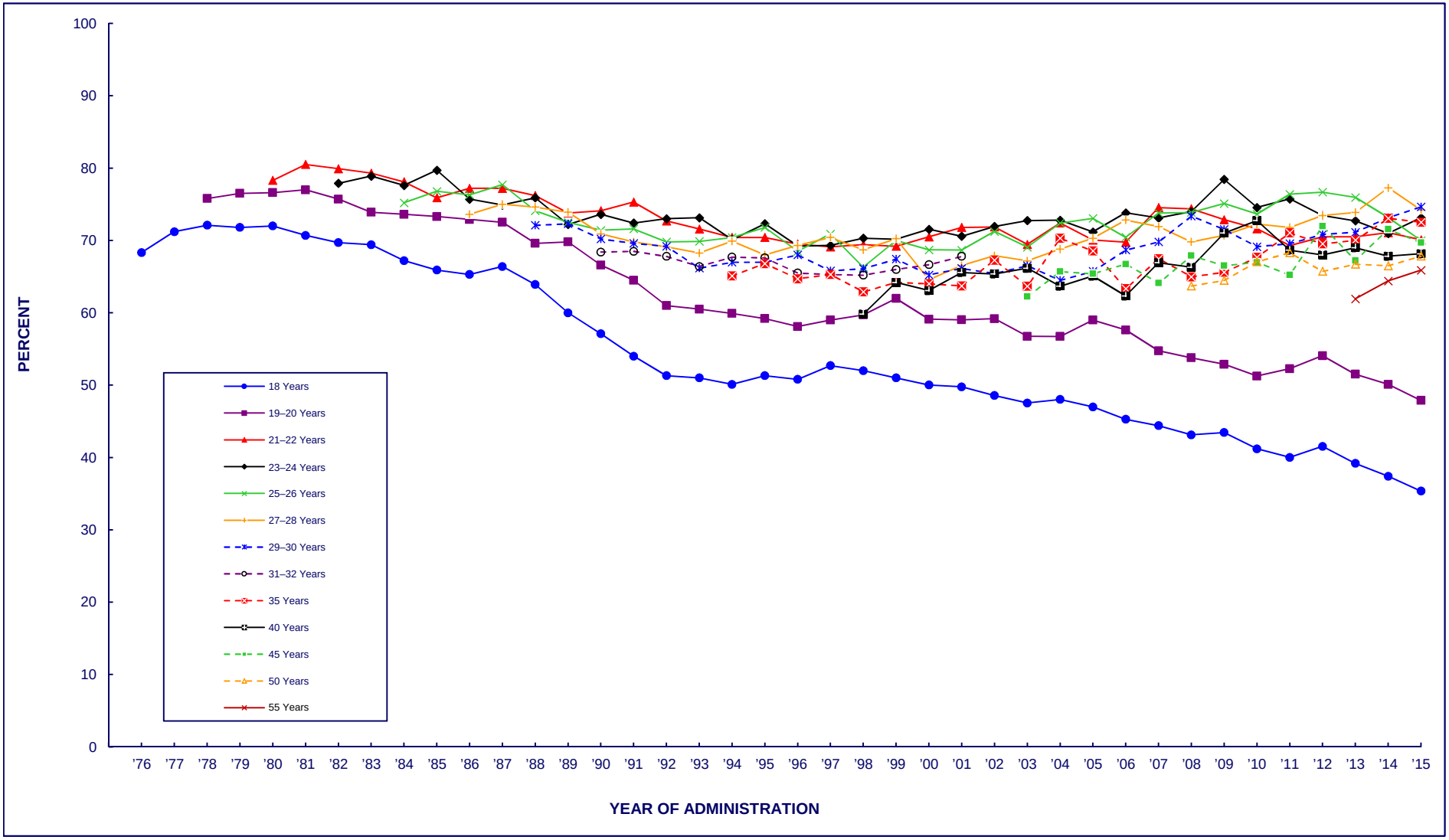
Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Ages 31–32 [a]	Age 35	Age 40	Age 45	Age 50	Age 55
1976	85.7												
1977	87.0												
1978	87.7	89.8											
1979	88.1	90.6											
1980	87.9	89.0	90.2										
1981	87.0	90.6	91.6										
1982	86.8	88.6	91.8	90.0									
1983	87.3	88.5	91.8	91.7									
1984	86.0	88.7	89.1	90.4	88.2								
1985	85.6	88.5	89.8	91.6	89.9								
1986	84.5	88.2	90.1	88.1	88.8	87.8							
1987	85.7	88.2	90.8	89.7	90.5	87.8							
1988	85.3	86.6	89.5	89.7	89.4	87.7	87.2						
1989	82.7	87.5	89.1	88.7	87.5	88.0	86.0						
1990	80.6	85.6	89.6	88.2	87.5	86.4	86.9	84.8					
1991	77.7	84.6	89.0	88.1	87.7	85.3	85.0	83.8					
1992	76.8	81.9	87.9	89.1	86.7	85.6	84.5	85.0					
1993	76.0	80.6	85.9	87.8	87.8	85.7	83.2	83.6					
1994	73.0	78.2	84.4	86.6	86.0	84.5	82.6	83.6	82.5				
1995	73.7	78.3	85.7	87.8	86.7	85.7	83.3	81.8	82.1				
1996	72.5	79.6	84.4	85.7	85.9	85.3	84.7	82.0	83.5				
1997	74.8	79.2	85.1	85.4	86.4	85.9	83.7	83.3	82.3				
1998	74.3	79.7	86.3	84.9	83.8	85.3	84.2	83.2	82.3	77.3			
1999	73.8	79.6	85.5	85.2	85.0	85.4	85.4	85.1	81.0	80.0			
2000	73.2	79.7	86.2	87.2	84.2	82.9	83.7	82.9	81.0	80.3			
2001	73.3	77.6	87.0	86.7	86.3	84.2	84.3	84.4	82.7	81.5			
2002	71.5	78.0	85.8	88.0	88.3	84.7	83.6	—	85.1	80.0			
2003	70.1	75.0	84.3	87.6	86.4	83.6	83.9	—	82.6	81.6	78.9		
2004	70.6	75.2	86.8	87.2	87.9	86.1	83.5	—	86.7	79.8	79.2		
2005	68.6	77.3	84.4	86.6	85.6	85.3	84.8	—	85.8	81.6	80.3		
2006	66.5	77.9	83.6	88.2	86.4	86.9	84.0	—	83.7	80.5	82.8		
2007	66.4	72.9	87.8	87.8	86.1	85.8	85.9	—	84.0	85.2	80.7		
2008	65.5	72.3	88.6	86.6	86.4	84.7	87.8	—	84.3	82.0	80.3	79.0	
2009	66.2	71.4	85.2	89.3	88.2	87.2	84.8	—	83.5	86.6	81.3	79.7	
2010	65.2	68.8	83.4	89.2	86.7	86.6	86.7	—	85.0	86.1	81.1	80.3	
2011	63.5	71.5	82.1	88.3	90.6	86.4	85.1	—	89.0	84.4	80.6	82.1	
2012	63.5	70.3	81.8	85.0	89.4	86.7	84.2	—	87.2	83.0	84.4	80.2	
2013	62.0	68.4	82.8	84.7	87.9	89.6	86.6	—	86.7	83.5	81.5	79.7	76.9
2014	60.2	67.3	84.0	85.3	85.5	90.2	86.4	—	89.2	84.1	84.8	83.3	77.9
2015	58.2	67.9	84.3	85.0	83.7	85.8	88.4	—	85.9	81.9	85.3	80.6	78.4

Source. The Monitoring the Future study, the University of Michigan.

Notes. ' — ' indicates data not available.

[a] Beginning in 2002, respondents were followed through age 30 instead of age 32 as in past years.

FIGURE 5-18b
ALCOHOL
Trends in 30-Day Prevalence
among Respondents of Modal Ages 18 through 55, by Age Group



(Figure continued on next page.)

FIGURE 5-18b (cont.)
ALCOHOL
Trends in 30-Day Prevalence
among Respondents of Modal Ages 18 through 55, by Age Group

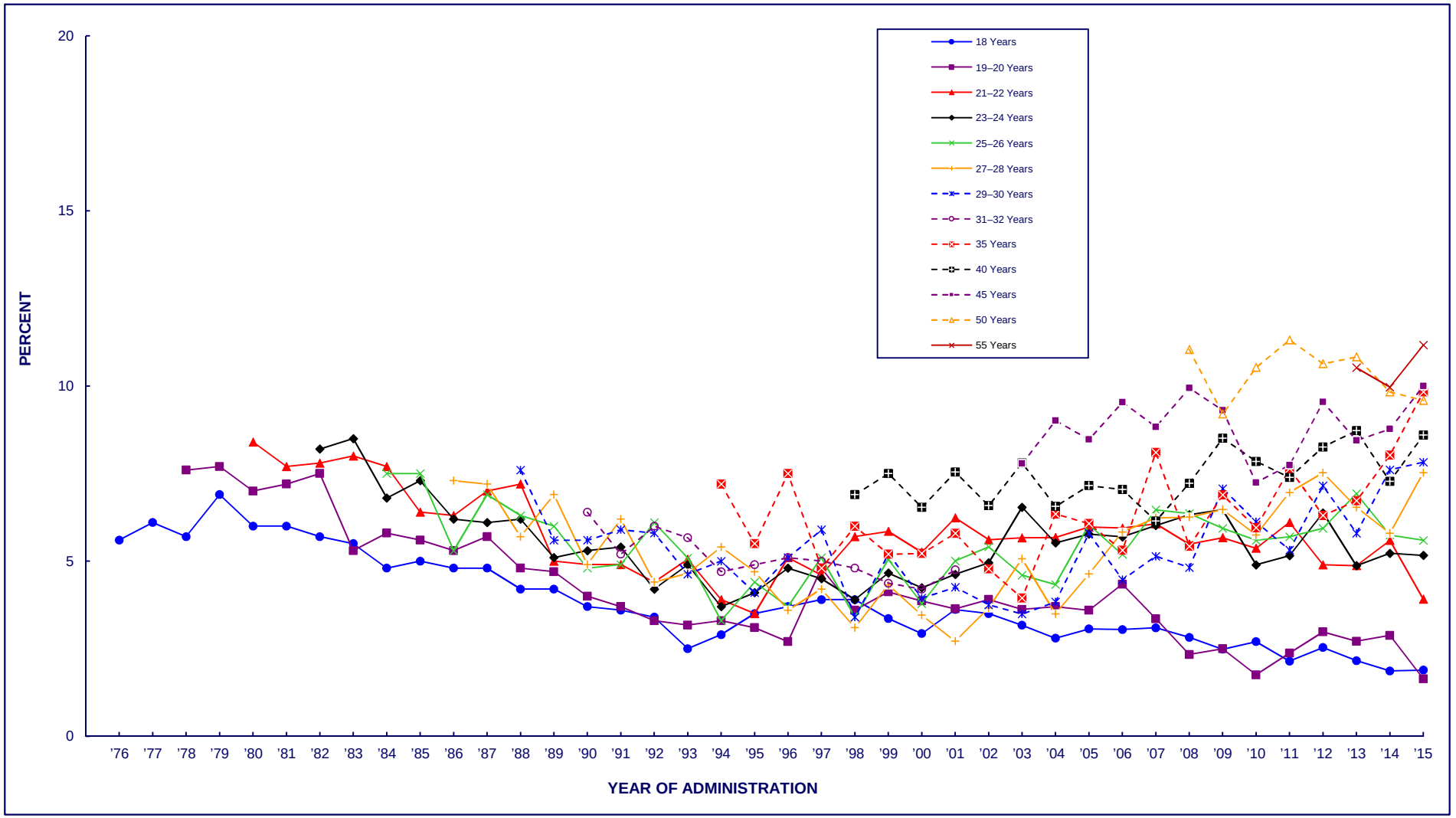
Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Ages 31–32 [a]	Age 35	Age 40	Age 45	Age 50	Age 55
1976	68.3												
1977	71.2												
1978	72.1	75.8											
1979	71.8	76.5											
1980	72.0	76.6	78.3										
1981	70.7	77.0	80.5										
1982	69.7	75.7	79.9	77.9									
1983	69.4	73.9	79.3	78.9									
1984	67.2	73.6	78.1	77.6	75.2								
1985	65.9	73.3	75.9	79.7	76.8								
1986	65.3	72.9	77.2	75.7	76.3	73.6							
1987	66.4	72.5	77.2	74.9	77.7	75.0							
1988	63.9	69.6	76.2	75.9	74.1	74.6	72.1						
1989	60.0	69.8	73.8	72.2	72.5	73.9	72.3						
1990	57.1	66.6	74.1	73.6	71.4	70.9	70.2	68.4					
1991	54.0	64.5	75.3	72.4	71.6	69.8	69.6	68.5					
1992	51.3	61.0	72.7	73.0	69.8	69.1	69.2	67.8					
1993	51.0	60.5	71.6	73.1	69.9	68.3	66.2	66.4					
1994	50.1	59.9	70.4	70.1	70.4	69.9	67.0	67.7	65.1				
1995	51.3	59.2	70.4	72.3	71.8	68.0	67.0	67.6	66.8				
1996	50.8	58.1	69.5	69.2	68.5	69.3	68.0	65.5	64.7				
1997	52.7	59.0	69.1	69.3	70.9	70.4	65.8	65.3	65.3				
1998	52.0	59.7	69.4	70.3	66.3	68.7	66.1	65.2	62.9	59.8			
1999	51.0	62.0	69.2	70.2	70.0	70.2	67.4	66.0	64.2	64.2			
2000	50.0	59.1	70.5	71.5	68.7	64.6	65.2	66.7	64.0	63.1			
2001	49.8	59.0	71.8	70.6	68.7	66.5	66.2	67.8	63.7	65.6			
2002	48.6	59.2	71.9	71.9	71.2	67.9	65.4	—	67.3	65.4			
2003	47.5	56.7	69.5	72.7	69.1	67.2	66.5	—	63.7	66.2	62.2		
2004	48.0	56.7	72.4	72.8	72.4	68.8	64.5	—	70.3	63.7	65.7		
2005	47.0	59.0	70.1	71.2	73.0	70.3	65.7	—	68.5	65.1	65.4		
2006	45.3	57.6	69.7	73.8	70.4	72.8	68.7	—	63.3	62.3	66.7		
2007	44.4	54.7	74.5	73.1	73.8	71.9	69.8	—	67.5	66.9	64.1		
2008	43.1	53.8	74.4	74.0	73.9	69.8	73.4	—	65.0	66.3	67.9	63.7	
2009	43.5	52.9	72.9	78.4	75.1	70.7	71.5	—	65.6	71.0	66.5	64.5	
2010	41.2	51.2	71.6	74.6	73.6	72.2	69.1	—	67.7	72.7	67.0	67.1	
2011	40.0	52.3	69.3	75.7	76.4	71.8	69.6	—	71.1	68.6	65.2	68.3	
2012	41.5	54.1	70.5	73.5	76.7	73.4	70.8	—	69.5	68.0	72.0	65.7	
2013	39.2	51.5	70.5	72.7	75.9	73.9	71.1	—	70.0	69.0	67.2	66.7	61.9
2014	37.4	50.1	71.1	71.0	73.2	77.3	73.2	—	73.1	67.8	71.6	66.5	64.4
2015	35.3	47.9	70.1	73.1	70.0	74.2	74.7	—	72.5	68.1	69.7	67.8	65.9

Source. The Monitoring the Future study, the University of Michigan.

Notes. ' — ' indicates data not available.

[a]Beginning in 2002, respondents were followed through age 30 instead of age 32 as in past years.

FIGURE 5-18c
ALCOHOL
Trends in 30-Day Prevalence of Daily Use
among Respondents of Modal Ages 18 through 55, by Age Group



(Figure continued on next page.)

FIGURE 5-18c (cont.)
ALCOHOL
Trends in 30-Day Prevalence of Daily Use among Respondents of Modal Ages 18 through 55, by Age Group

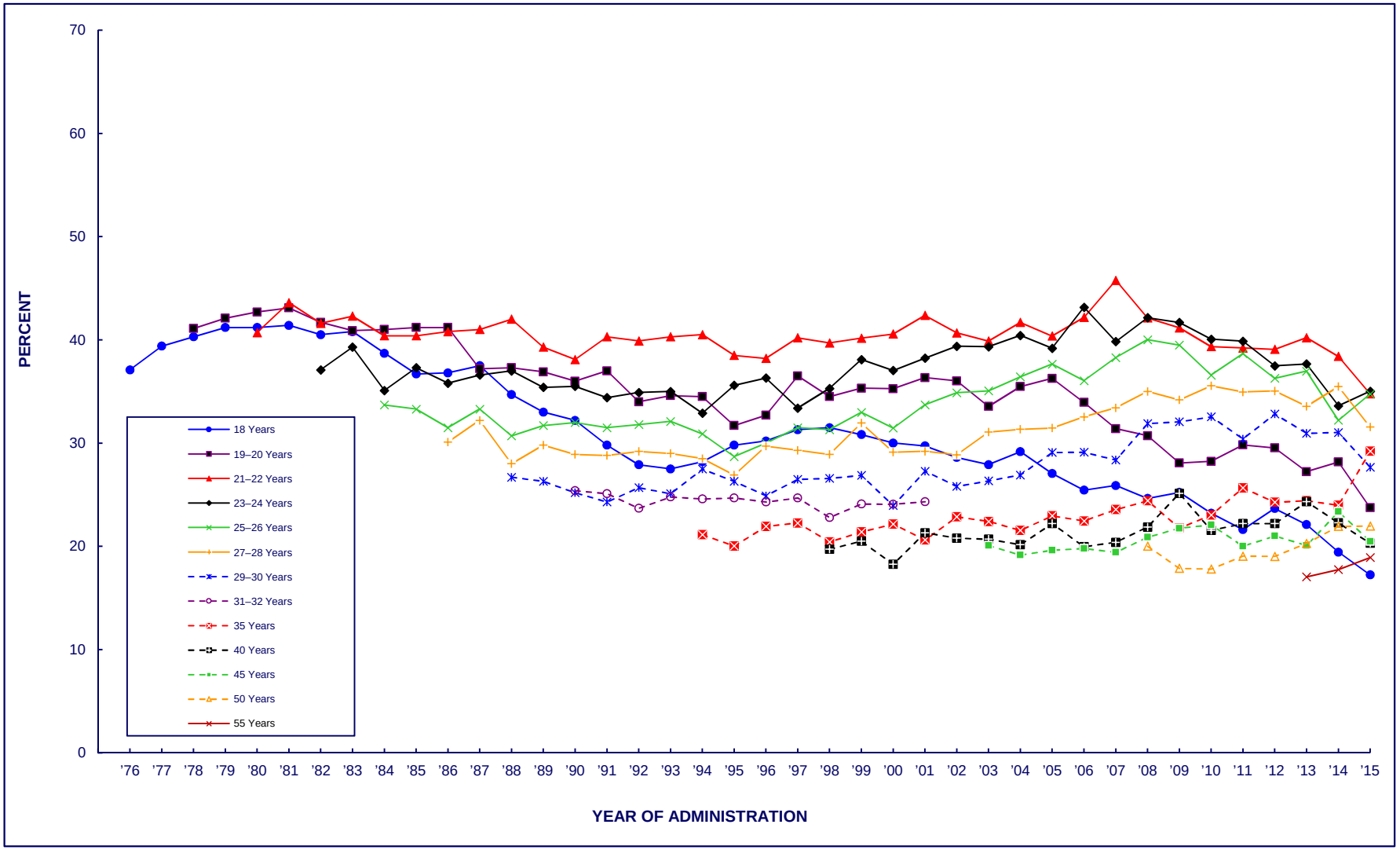
Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Ages 31–32 [a]	Age 35	Age 40	Age 45	Age 50	Age 55
1976	5.6												
1977	6.1												
1978	5.7	7.6											
1979	6.9	7.7											
1980	6.0	7.0	8.4										
1981	6.0	7.2	7.7										
1982	5.7	7.5	7.8	8.2									
1983	5.5	5.3	8.0	8.5									
1984	4.8	5.8	7.7	6.8	7.5								
1985	5.0	5.6	6.4	7.3	7.5								
1986	4.8	5.3	6.3	6.2	5.3	7.3							
1987	4.8	5.7	7.0	6.1	6.9	7.2							
1988	4.2	4.8	7.2	6.2	6.3	5.7	7.6						
1989	4.2	4.7	5.0	5.1	6.0	6.9	5.6						
1990	3.7	4.0	4.9	5.3	4.8	4.9	5.6	6.4					
1991	3.6	3.7	4.9	5.4	4.9	6.2	5.9	5.2					
1992	3.4	3.3	4.4	4.2	6.1	4.4	5.8	6.0					
1993	2.5	3.2	5.1	4.9	5.1	4.7	4.6	5.7					
1994	2.9	3.3	3.9	3.7	3.3	5.4	5.0	4.7	7.2				
1995	3.5	3.1	3.5	4.1	4.4	4.7	4.1	4.9	5.5				
1996	3.7	2.7	5.1	4.8	3.7	3.6	5.1	5.1	7.5				
1997	3.9	4.8	4.6	4.5	5.1	4.2	5.9	5.0	4.8				
1998	3.9	3.6	5.7	3.9	3.4	3.1	3.4	4.8	6.0	6.9			
1999	3.4	4.1	5.9	4.7	5.1	4.3	5.2	4.4	5.2	7.5			
2000	2.9	3.9	5.3	4.2	3.8	3.5	3.9	4.2	5.2	6.5			
2001	3.6	3.6	6.2	4.6	5.0	2.7	4.3	4.7	5.8	7.5			
2002	3.5	3.9	5.6	5.0	5.4	3.7	3.8	—	4.8	6.6			
2003	3.2	3.6	5.7	6.5	4.6	5.1	3.5	—	3.9	7.8	7.8		
2004	2.8	3.7	5.7	5.5	4.3	3.5	3.8	—	6.3	6.6	9.0		
2005	3.1	3.6	6.0	5.8	6.0	4.6	5.8	—	6.1	7.2	8.5		
2006	3.0	4.3	5.9	5.7	5.2	5.8	4.5	—	5.3	7.0	9.5		
2007	3.1	3.4	6.1	6.0	6.5	6.2	5.1	—	8.1	6.1	8.8		
2008	2.8	2.3	5.5	6.3	6.4	6.3	4.8	—	5.4	7.2	9.9	11.0	
2009	2.5	2.5	5.7	6.5	5.9	6.5	7.1	—	6.9	8.5	9.3	9.2	
2010	2.7	1.8	5.4	4.9	5.6	5.7	6.1	—	6.0	7.8	7.2	10.5	
2011	2.1	2.4	6.1	5.2	5.7	7.0	5.3	—	7.6	7.4	7.7	11.3	
2012	2.5	3.0	4.9	6.4	5.9	7.5	7.2	—	6.3	8.3	9.5	10.6	
2013	2.2	2.7	4.9	4.9	6.9	6.5	5.8	—	6.7	8.7	8.4	10.8	10.5
2014	1.9	2.9	5.6	5.2	5.7	5.8	7.6	—	8.0	7.3	8.8	9.8	10.0
2015	1.9	1.6	3.9	5.2	5.6	7.5	7.8	—	9.8	8.6	10.0	9.6	11.2

Source. The Monitoring the Future study, the University of Michigan.

Notes. ' — ' indicates data not available.

[a] Beginning in 2002, respondents were followed through age 30 instead of age 32 as in past years.

FIGURE 5-18d
ALCOHOL
Trends in 2-Week Prevalence of Having 5 or More Drinks in a Row among Respondents of Modal Ages 18 through 55, by Age Group



(Figure continued on next page.)

FIGURE 5-18d (cont.)
ALCOHOL
Trends in 2-Week Prevalence of Having 5 or More Drinks in a Row among Respondents of Modal Ages 18 through 55, by Age Group

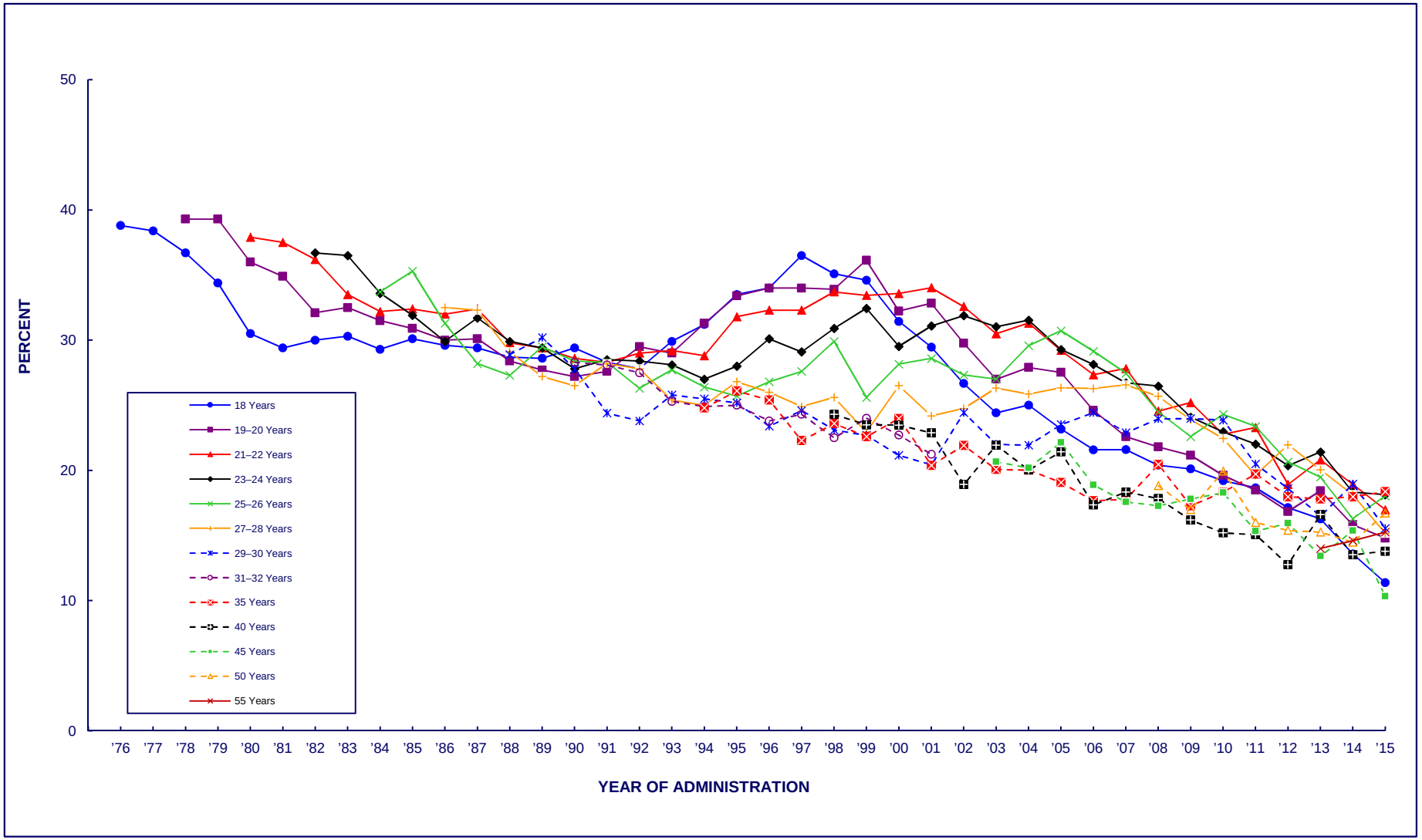
Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Ages 31–32 [a]	Age 35	Age 40	Age 45	Age 50	Age 55
1976	37.1												
1977	39.4												
1978	40.3	41.1											
1979	41.2	42.1											
1980	41.2	42.7	40.7										
1981	41.4	43.1	43.6										
1982	40.5	41.7	41.6	37.1									
1983	40.8	40.9	42.3	39.3									
1984	38.7	41.0	40.4	35.1	33.7								
1985	36.7	41.2	40.4	37.3	33.3								
1986	36.8	41.2	40.8	35.8	31.5	30.1							
1987	37.5	37.2	41.0	36.6	33.3	32.2							
1988	34.7	37.3	42.0	37.0	30.7	28.0	26.7						
1989	33.0	36.9	39.3	35.4	31.7	29.8	26.3						
1990	32.2	36.0	38.1	35.5	32.0	28.9	25.2	25.4					
1991	29.8	37.0	40.3	34.4	31.5	28.8	24.3	25.1					
1992	27.9	34.0	39.9	34.9	31.8	29.2	25.7	23.7					
1993	27.5	34.6	40.3	35.0	32.1	29.0	25.1	24.8					
1994	28.2	34.5	40.5	32.9	30.9	28.5	27.5	24.6	21.1				
1995	29.8	31.7	38.5	35.6	28.7	26.9	26.3	24.7	20.0				
1996	30.2	32.7	38.2	36.3	30.0	29.7	24.9	24.3	21.9				
1997	31.3	36.5	40.2	33.4	31.5	29.3	26.5	24.7	22.3				
1998	31.5	34.5	39.7	35.3	31.3	28.9	26.6	22.8	20.4	19.7			
1999	30.8	35.3	40.2	38.1	33.0	32.0	26.9	24.1	21.4	20.5			
2000	30.0	35.3	40.6	37.0	31.5	29.1	24.0	24.1	22.2	18.3			
2001	29.7	36.3	42.4	38.2	33.7	29.2	27.3	24.3	20.6	21.3			
2002	28.6	36.0	40.7	39.4	34.9	28.9	25.8	—	22.9	20.8			
2003	27.9	33.6	39.9	39.3	35.1	31.1	26.4	—	22.4	20.7	20.1		
2004	29.2	35.5	41.7	40.4	36.4	31.3	26.9	—	21.6	20.2	19.2		
2005	27.1	36.3	40.4	39.2	37.7	31.5	29.1	—	23.0	22.2	19.6		
2006	25.4	33.9	42.2	43.2	36.0	32.5	29.1	—	22.5	20.0	19.8		
2007	25.9	31.4	45.8	39.8	38.3	33.4	28.4	—	23.6	20.4	19.4		
2008	24.6	30.7	42.1	42.2	40.0	35.0	31.9	—	24.4	21.9	20.9	20.0	
2009	25.2	28.1	41.2	41.7	39.5	34.2	32.1	—	21.8	25.1	21.8	17.9	
2010	23.2	28.2	39.3	40.1	36.6	35.6	32.6	—	23.0	21.6	22.1	17.8	
2011	21.6	29.8	39.2	39.9	38.7	35.0	30.4	—	25.7	22.2	20.0	19.1	
2012	23.7	29.5	39.1	37.5	36.3	35.1	32.8	—	24.3	22.2	21.0	19.0	
2013	22.1	27.2	40.2	37.7	37.0	33.6	30.9	—	24.4	24.3	20.1	20.3	17.0
2014	19.4	28.2	38.4	33.6	32.2	35.5	31.0	—	24.0	22.3	23.4	21.9	17.7
2015	17.2	23.7	34.8	35.0	34.8	31.6	27.7	—	29.2	20.3	20.5	22.0	18.9

Source. The Monitoring the Future study, the University of Michigan.

Notes. ' — ' indicates data not available.

[a]Beginning in 2002, respondents were followed through age 30 instead of age 32 as in past years.

FIGURE 5-19a
CIGARETTES
Trends in 30-Day Prevalence
among Respondents of Modal Ages 18 through 55, by Age Group



(Figure continued on next page.)

FIGURE 5-19a (cont.)
CIGARETTES
Trends in 30-Day Prevalence
among Respondents of Modal Ages 18 through 55, by Age Group

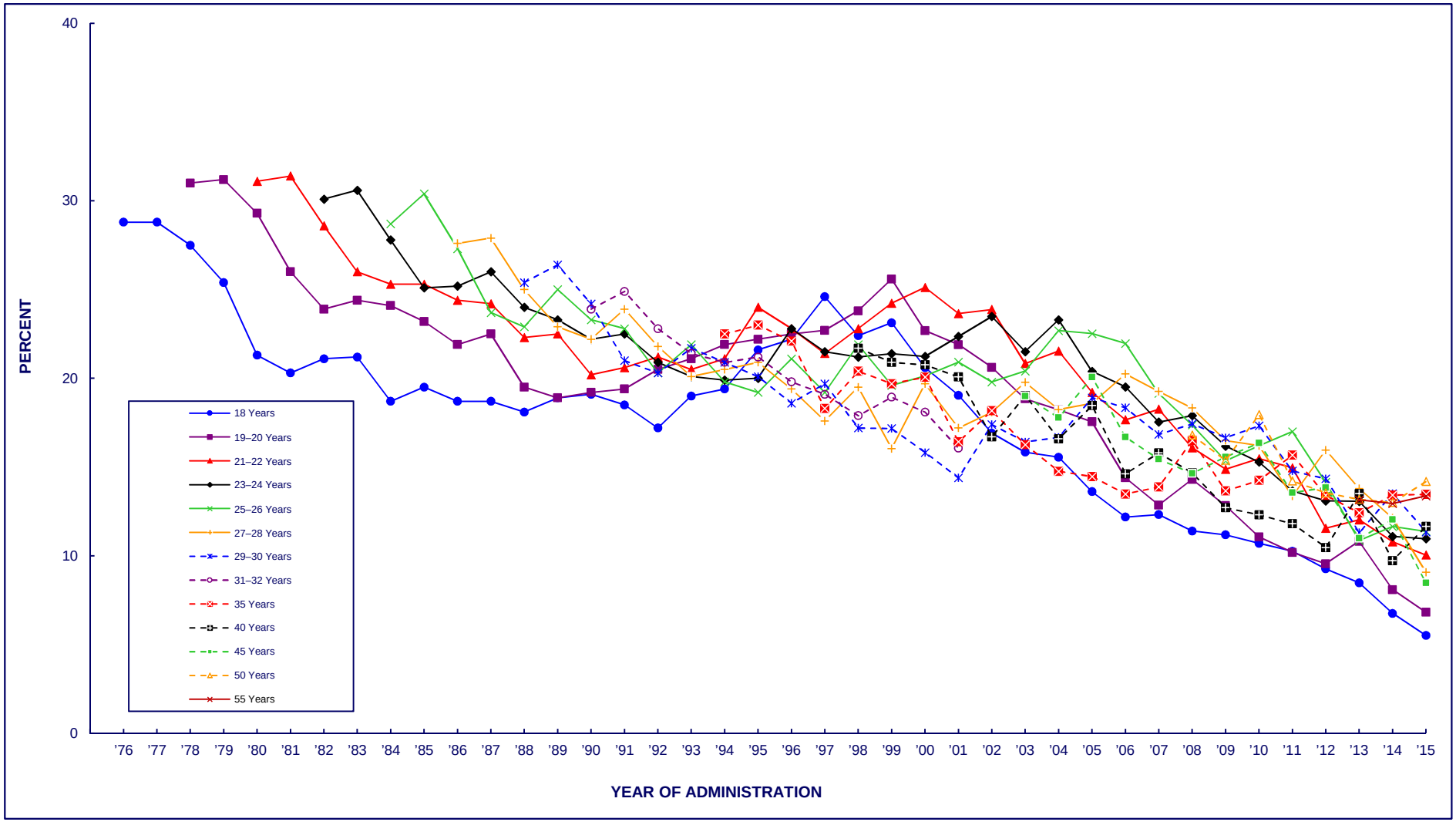
Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Ages 31–32 [a]	Age 35	Age 40	Age 45	Age 50	Age 55
1976	38.8												
1977	38.4												
1978	36.7	39.3											
1979	34.4	39.3											
1980	30.5	36.0	37.9										
1981	29.4	34.9	37.5										
1982	30.0	32.1	36.2	36.7									
1983	30.3	32.5	33.5	36.5									
1984	29.3	31.5	32.2	33.6	33.7								
1985	30.1	30.9	32.4	31.9	35.3								
1986	29.6	30.0	32.0	29.9	31.3	32.5							
1987	29.4	30.1	32.4	31.7	28.2	32.3							
1988	28.7	28.4	29.8	29.9	27.3	29.1	28.9						
1989	28.6	27.7	29.4	29.4	29.5	27.2	30.2						
1990	29.4	27.2	28.6	27.8	28.4	26.5	27.8	28.3					
1991	28.3	27.6	28.3	28.5	28.3	28.2	24.4	28.1					
1992	27.8	29.5	29.0	28.4	26.3	27.8	23.8	27.5					
1993	29.9	29.0	29.2	28.1	27.7	25.4	25.8	25.3					
1994	31.2	31.3	28.8	27.0	26.4	25.0	25.5	24.9	24.8				
1995	33.5	33.4	31.8	28.0	25.7	26.8	25.2	25.0	26.1				
1996	34.0	34.0	32.3	30.1	26.8	26.0	23.4	23.8	25.4				
1997	36.5	34.0	32.3	29.1	27.6	24.9	24.6	24.3	22.3				
1998	35.1	33.9	33.7	30.9	29.9	25.6	23.1	22.5	23.6	24.3			
1999	34.6	36.1	33.4	32.4	25.6	22.9	22.7	24.0	22.6	23.5			
2000	31.4	32.2	33.6	29.5	28.2	26.5	21.2	22.7	24.0	23.5			
2001	29.5	32.8	34.0	31.1	28.6	24.2	20.4	21.2	20.4	22.9			
2002	26.7	29.8	32.6	31.9	27.3	24.7	24.4	—	21.9	18.9			
2003	24.4	27.0	30.5	31.0	27.0	26.3	22.0	—	20.1	21.9	20.7		
2004	25.0	27.9	31.3	31.5	29.6	25.9	21.9	—	20.0	20.0	20.2		
2005	23.2	27.5	29.2	29.3	30.7	26.3	23.5	—	19.1	21.4	22.1		
2006	21.6	24.6	27.3	28.1	29.1	26.3	24.4	—	17.7	17.3	18.9		
2007	21.6	22.6	27.8	26.7	27.5	26.6	22.9	—	17.8	18.3	17.6		
2008	20.4	21.8	24.5	26.5	24.5	25.7	24.0	—	20.4	17.8	17.3	18.8	
2009	20.1	21.2	25.2	24.1	22.6	23.9	24.0	—	17.3	16.2	17.8	17.0	
2010	19.2	19.6	22.8	23.0	24.3	22.5	23.9	—	18.3	15.2	18.3	19.9	
2011	18.7	18.5	23.3	22.0	23.4	19.6	20.5	—	19.7	15.1	15.3	16.0	
2012	17.1	16.8	18.9	20.4	20.7	22.0	18.6	—	18.0	12.8	15.9	15.4	
2013	16.3	18.4	20.8	21.4	19.5	20.0	16.5	—	17.8	16.6	13.4	15.3	14.0
2014	13.6	15.8	18.9	18.3	16.3	18.1	19.0	—	18.0	13.5	15.4	14.5	14.6
2015	11.4	14.8	17.0	18.1	18.0	15.2	15.5	—	18.4	13.8	10.3	16.7	15.3

Source. The Monitoring the Future study, the University of Michigan.

Notes. ' — ' indicates data not available.

[a] Beginning in 2002, respondents were followed through age 30 instead of age 32 as in past years.

FIGURE 5-19b
CIGARETTES
Trends in 30-Day Prevalence of Daily Use
among Respondents of Modal Ages 18 through 55, by Age Group



(Figure continued on next page.)

FIGURE 5-19b (cont.)
CIGARETTES
Trends in 30-Day Prevalence of Daily Use among Respondents of Modal Ages 18 through 55, by Age Group

Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Ages 31–32 [a]	Age 35	Age 40	Age 45	Age 50	Age 55
1976	28.8												
1977	28.8												
1978	27.5	31.0											
1979	25.4	31.2											
1980	21.3	29.3	31.1										
1981	20.3	26.0	31.4										
1982	21.1	23.9	28.6	30.1									
1983	21.2	24.4	26.0	30.6									
1984	18.7	24.1	25.3	27.8	28.7								
1985	19.5	23.2	25.3	25.1	30.4								
1986	18.7	21.9	24.4	25.2	27.3	27.6							
1987	18.7	22.5	24.2	26.0	23.7	27.9							
1988	18.1	19.5	22.3	24.0	22.9	25.0	25.4						
1989	18.9	18.9	22.5	23.3	25.0	22.9	26.4						
1990	19.1	19.2	20.2	22.2	23.3	22.2	24.2	23.9					
1991	18.5	19.4	20.6	22.5	22.8	23.9	21.0	24.9					
1992	17.2	20.5	21.2	20.9	20.3	21.8	20.3	22.8					
1993	19.0	21.1	20.5	20.1	21.9	20.1	21.7	21.4					
1994	19.4	21.9	21.1	19.9	19.8	20.5	20.9	20.9	22.5				
1995	21.6	22.2	24.0	20.0	19.2	20.9	20.1	21.2	23.0				
1996	22.2	22.5	22.8	22.8	21.1	19.4	18.6	19.8	22.1				
1997	24.6	22.7	21.4	21.5	19.2	17.6	19.7	19.1	18.3				
1998	22.4	23.8	22.8	21.2	21.9	19.5	17.2	17.9	20.4	21.7			
1999	23.1	25.6	24.2	21.4	19.6	16.0	17.2	18.9	19.7	20.9			
2000	20.6	22.7	25.1	21.2	20.1	19.7	15.8	18.1	20.1	20.8			
2001	19.0	21.9	23.6	22.4	20.9	17.2	14.4	16.1	16.4	20.1			
2002	16.9	20.6	23.9	23.5	19.8	18.1	17.4	—	18.2	16.7			
2003	15.8	18.8	20.8	21.5	20.4	19.8	16.4	—	16.3	19.0	19.0		
2004	15.6	18.2	21.5	23.3	22.7	18.2	16.7	—	14.8	16.6	17.8		
2005	13.6	17.6	19.2	20.4	22.5	18.6	18.9	—	14.5	18.5	20.1		
2006	12.2	14.4	17.7	19.5	22.0	20.2	18.3	—	13.5	14.6	16.7		
2007	12.3	12.9	18.3	17.5	19.2	19.3	16.8	—	13.9	15.8	15.4		
2008	11.4	14.3	16.1	17.9	17.4	18.3	17.4	—	16.5	14.7	14.6	16.8	
2009	11.2	12.8	14.9	16.2	15.3	16.5	16.7	—	13.7	12.7	15.6	15.4	
2010	10.7	11.1	15.5	15.3	16.2	16.2	17.3	—	14.3	12.3	16.4	18.0	
2011	10.3	10.2	15.0	13.7	17.0	13.4	14.8	—	15.7	11.8	13.6	14.2	
2012	9.3	9.5	11.5	13.1	14.1	16.0	14.3	—	13.4	10.5	13.8	13.5	
2013	8.5	10.8	12.0	13.1	10.9	13.8	11.3	—	12.4	13.5	11.0	13.2	13.2
2014	6.7	8.1	10.8	11.1	11.6	12.1	13.5	—	13.4	9.7	12.0	13.0	12.9
2015	5.5	6.8	10.0	11.0	11.4	9.1	11.3	—	13.5	11.6	8.5	14.2	13.4

Source. The Monitoring the Future study, the University of Michigan.

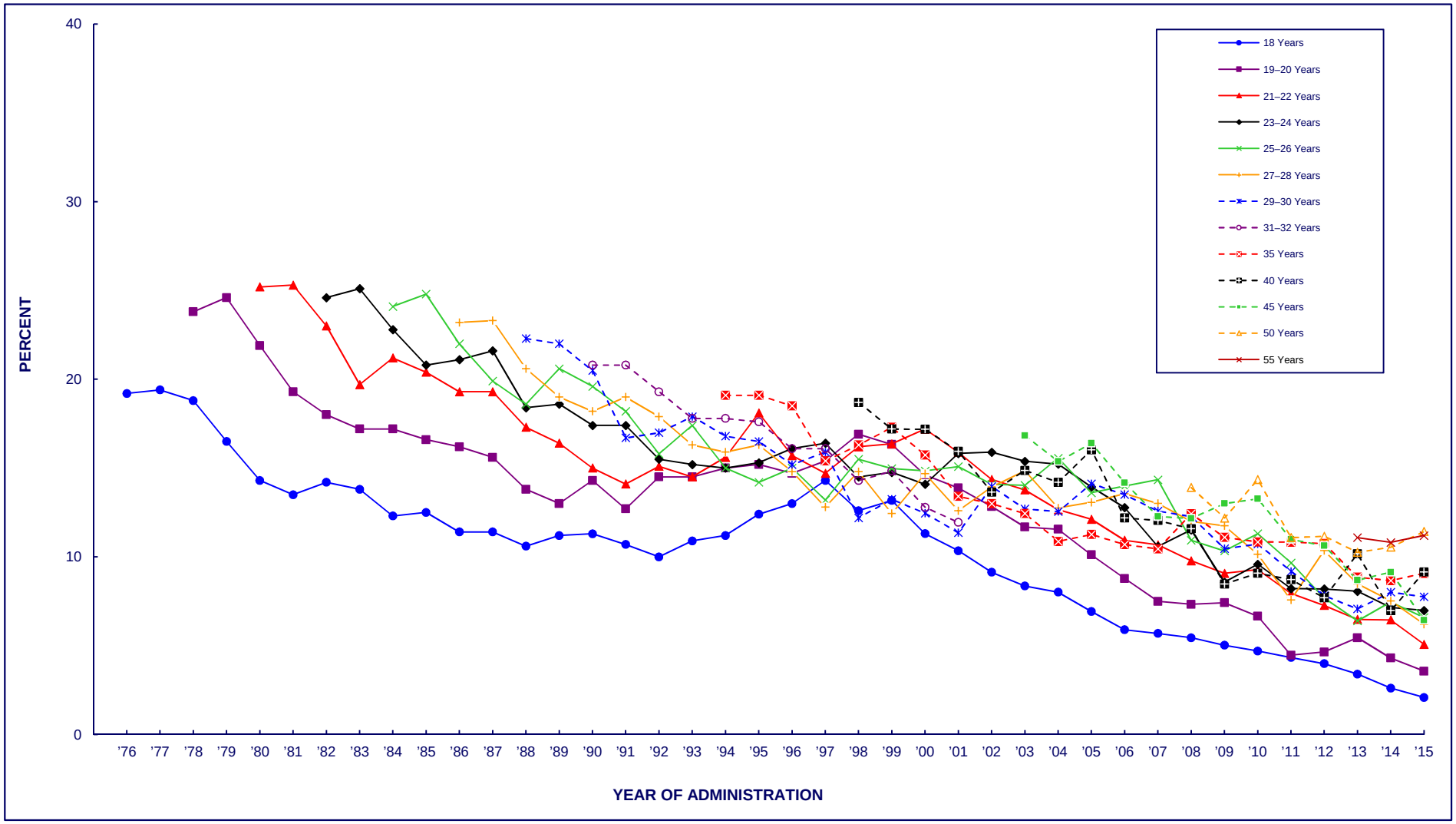
Notes. ' — ' indicates data not available.

[a]Beginning in 2002, respondents were followed through age 30 instead of age 32 as in past years.

FIGURE 5-19c

CIGARETTES

Trends in 30-Day Prevalence of Smoking a Half Pack or More per Day among Respondents of Modal Ages 18 through 55, by Age Group



(Figure continued on next page.)

FIGURE 5-19c (cont.)
CIGARETTES
Trends in 30-Day Prevalence of Smoking a Half Pack or More per Day among Respondents of Modal Ages 18 through 55, by Age Group

Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Ages 31–32 [a]	Age 35	Age 40	Age 45	Age 50	Age 55
1976	19.2												
1977	19.4												
1978	18.8	23.8											
1979	16.5	24.6											
1980	14.3	21.9	25.2										
1981	13.5	19.3	25.3										
1982	14.2	18.0	23.0	24.6									
1983	13.8	17.2	19.7	25.1									
1984	12.3	17.2	21.2	22.8	24.1								
1985	12.5	16.6	20.4	20.8	24.8								
1986	11.4	16.2	19.3	21.1	22.0	23.2							
1987	11.4	15.6	19.3	21.6	19.9	23.3							
1988	10.6	13.8	17.3	18.4	18.6	20.6	22.3						
1989	11.2	13.0	16.4	18.6	20.6	19.0	22.0						
1990	11.3	14.3	15.0	17.4	19.6	18.2	20.5	20.8					
1991	10.7	12.7	14.1	17.4	18.2	19.0	16.7	20.8					
1992	10.0	14.5	15.1	15.5	15.8	17.9	17.0	19.3					
1993	10.9	14.5	14.5	15.2	17.4	16.3	17.9	17.8					
1994	11.2	15.0	15.6	15.0	15.0	15.9	16.8	17.8	19.1				
1995	12.4	15.2	18.1	15.3	14.2	16.3	16.5	17.6	19.1				
1996	13.0	14.7	15.7	16.1	15.0	14.8	15.2	16.1	18.5				
1997	14.3	15.4	14.7	16.4	13.2	12.8	15.9	16.1	15.4				
1998	12.6	16.9	16.2	14.5	15.5	14.8	12.2	14.3	16.3	18.7			
1999	13.2	16.3	16.4	14.8	15.0	12.4	13.2	14.8	17.3	17.2			
2000	11.3	14.6	17.2	14.1	14.8	14.7	12.5	12.8	15.7	17.2			
2001	10.3	13.9	15.9	15.8	15.1	12.6	11.4	11.9	13.4	15.9			
2002	9.1	12.8	14.4	15.9	14.1	13.9	14.0	—	13.0	13.6			
2003	8.4	11.7	13.8	15.4	14.0	14.8	12.7	—	12.4	14.9	16.8		
2004	8.0	11.6	12.7	15.2	15.6	12.8	12.5	—	10.9	14.2	15.4		
2005	6.9	10.1	12.1	13.9	13.6	13.1	14.1	—	11.3	16.0	16.4		
2006	5.9	8.8	10.9	12.8	14.0	13.6	13.5	—	10.7	12.2	14.2		
2007	5.7	7.5	10.7	10.6	14.3	13.0	12.6	—	10.5	12.1	12.3		
2008	5.4	7.3	9.8	11.5	10.9	12.0	12.3	—	12.4	11.6	12.2	13.9	
2009	5.0	7.4	9.1	8.6	10.3	11.8	10.5	—	11.1	8.5	13.0	12.2	
2010	4.7	6.7	9.3	9.6	11.3	10.1	10.7	—	10.8	9.1	13.3	14.4	
2011	4.3	4.5	7.9	8.2	9.7	7.6	9.2	—	10.8	8.7	11.0	11.1	
2012	4.0	4.6	7.3	8.2	7.7	10.4	7.8	—	10.8	7.7	10.6	11.2	
2013	3.4	5.4	6.5	8.1	6.4	8.5	7.1	—	8.9	10.2	8.7	10.3	11.1
2014	2.6	4.3	6.4	7.1	7.5	7.5	8.0	—	8.7	7.0	9.1	10.5	10.8
2015	2.1	3.6	5.1	7.0	6.6	6.2	7.7	—	9.1	9.2	6.4	11.4	11.2

Source. The Monitoring the Future study, the University of Michigan.

Notes. ' — ' indicates data not available.

[a]Beginning in 2002, respondents were followed through age 30 instead of age 32 as in past years.

Chapter 6

ATTITUDES AND BELIEFS ABOUT DRUGS AMONG YOUNG ADULTS

One of the most important theoretical contributions of MTF has been to demonstrate the extent to which attitudes and beliefs about drugs can help explain the use of drugs. Earlier volumes in this monograph series, as well as other publications from the study, have demonstrated that shifts in certain attitudes and beliefs—in particular the degree of risk of harm perceived to be associated with use of a particular drug—are important in explaining changes in actual drug-using behavior. Indeed, on a number of occasions we have accurately predicted such changes in use by using perceived risk as a *leading indicator of use*.[1] In this chapter, we review trends in these attitudes and beliefs held by young adults since 1980.

PERCEIVED HARMFULNESS OF DRUGS

Figures 6-1 through 6-33 present three separate trend lines for four-year age strata (that is, respondents who are one to four years beyond high school [modal ages 19–22], five to eight years beyond high school [modal ages 23–26], and nine to twelve years beyond high school [modal ages 27–30]). For comparison purposes, data are also included for the high school senior classes, listed as modal age 18-year-olds. Figures 6-1 to 6-3 present trends in the percentages of young adults aged 18 to 30 who perceive a "great risk" of harm associated with three different levels of marijuana use—trying it once or twice (experimental), smoking it occasionally, and smoking it regularly. Subsequent figures do the same for selected levels of use of various other licit and illicit drugs. Table 6-1 provides the tabular information underlying the figures.

For most of the life of the study, these questions were contained in one questionnaire form only, limiting the numbers of follow-up cases. Accordingly, we have used four-year age bands to increase the available sample sizes to about 300–600 weighted cases per year for each age band, thereby improving the reliability of the estimates. (The numbers of weighted cases are given at the end of Table 6-1. The actual numbers of respondents are somewhat larger.) Still, these are relatively small sample sizes compared to those available for 8th, 10th, and 12th graders, and thus the change estimates are relatively less stable.

Beginning with 2012 we expanded the numbers of forms from which these data are drawn; this increased the sample sizes from that point forward, thus improving the reliability of both the point estimates and the trend estimates. Because the questions are contained in different numbers of

[1]See also: Bachman, J. G., Johnston, L. D., O'Malley, P. M., & Humphrey, R. H. (1988). Explaining the recent decline in marijuana use: Differentiating the effects of perceived risks, disapproval, and general lifestyle factors. *Journal of Health and Social Behavior, 29,* 92–112; Bachman, J. G., Johnston, L. D., & O'Malley, P. M. (1990). Explaining the recent decline in cocaine use among young adults: Further evidence that perceived risks and disapproval lead to reduced drug use. *Journal of Health and Social Behavior, 31,* 173–184; Bachman, J. G., Johnston, L. D., & O'Malley, P. M. (1998). Explaining recent increases in students' marijuana use: Impacts of perceived risks and disapproval, 1976 through 1996. *American Journal of Public Health, 88,* 887–892; Johnston, L. D. (1981). Characteristics of the daily marijuana user. In R. de Silva, R. L. DuPont, & G. K. Russell (Eds.), *Treating the marijuana-dependent person* (pp. 12–15). New York: The American Council on Marijuana; Johnston, L. D. (1985). The etiology and prevention of substance use: What can we learn from recent historical changes? In C. L. Jones & R. J. Battjes (Eds.), *Etiology of drug abuse: Implications for prevention* (NIDA Research Monograph No. 56, DHHS Publication No. ADM 85 1335, pp. 155–177). Rockville, MD: National Institute on Drug Abuse. Keyes, K.M., Schulenberg, J.E., O'Malley, P.M., Johnston, L.D., Bachman, J.G., Li, G., & Hasin, D. (2011). The social norms of birth cohorts and adolescent marijuana use in the United States, 1976-2007. *Addiction*, *106*(10), 1790-1800. doi: 10.1111/j.1360-0443.2011.03485.x

forms for the different drugs, the sample sizes vary between drugs, as is noted in footnotes. For each question, we include data from all available forms.

Because of the nature of the MTF design, trend data are available for a longer period for 19- to 22-year-olds (since 1980) than for 23- to 26-year-olds (since 1984) or 27- to 30-year-olds (since 1988). Also displayed in this table are comparison data for 12th graders, shown here as 18-year-olds, from 1980 onward. (See also Table 8-3 in *Volume I* for the longer term trends in 12th graders' levels of perceived risk.) Questions about these attitudes and beliefs are not included in the questionnaires for respondents over age 30 due to the length limitations imposed by using a single questionnaire form for respondents age 35 and older.

- Table 6-1 and Figures 6-1 to 6-33 illustrate considerable differences in the degree of risk young adults have associated with various drugs. In general, the results closely have paralleled the distinctions made by 12th graders.

- ***Marijuana*** was seen as the least risky of the illicit drugs, although sharp distinctions were made between different levels of marijuana use (Figures 6-1 through 6-3). In 2015, experimental use of marijuana was perceived as being of great risk by only 8– to 11% of all high school graduates ages 19–30, whereas regular use was perceived to carry great risk by a considerably higher percentage (31–to 33%). Since 2006 there have been very substantial declines in perceived risk for regular marijuana use; in 2006, 55%-58% of all four age groups saw great risk, and by 2015, 31%-33% did so. These substantial declines suggest a possible period effect, that may well have been due to the increasing discussion about liberalizing marijuana laws, including for medical use and more recently for recreational use by adults. While actual law changes were specific to individual states, the discussions were very prominent nationwide, and we believe had a direct effect on perceived risk across the nation. Levels of perceived risk in 2015 were the lowest observed since each of the young adult age groups was included in the study – going back to 1980 in the case of 19-22 year olds. And likely not coincidentally, daily marijuana use in 2014 was at a new high among young adults, and just slightly lower in 2015.

- In the mid-1980s and early 1990s, fewer of the older age groups attached great risk to ***marijuana*** use than did the younger respondents (Figure 6-3). Indeed, there was a regular negative ordinal relationship between age and perceived risk for some years after 1980, when the first comparisons were available. Although at first this looked like an age effect, the MTF design allowed us to recognize it as a cohort effect; the younger cohorts initially perceived marijuana as more dangerous than the older cohorts did and persisted in such beliefs as they grew older. Newer cohorts, however, showed lower levels of perceived risk. Twelfth graders from the class of 2015 were much less likely to perceive regular marijuana use as dangerous, compared with 12th-grade cohorts in the late 1980s and early 1990s. This reflects what we have interpreted as generational forgetting, a phenomenon wherein younger replacement cohorts no longer carried the beliefs—nor had the direct or vicarious experience upon which those beliefs were based—that the older cohorts had at that age. (The implications of generational forgetting for prevention are discussed in the last section of this chapter.)

The decline in perceived risk that began in the 1990s was greater in the younger age bands, including grades 8 and 10, and least among the 27- to 30-year-olds. We believe that much of the eventual decline in perceived risk in the older age bands resulted directly from replacement of earlier cohorts by later, less concerned ones. The credibility of this view is strengthened by the 1993–1995 reversal of the relationship between age and perceived risk of regular use. This reversal is consistent with an underlying cohort effect and could not simply reflect an association between age and a regular change in these attitudes. The decline in perceived risk for regular marijuana use ended in a somewhat staggered fashion—among 12th graders in 1999, among 19- to 22-year-olds in 2001, among 23- to 26-year-olds in 2002, and among 27- to 30-year-olds in 2004. This was also indicative of a cohort effect playing out in these attitudes. In 2007 all four age strata showed declines of three to four percentage points in perceived risk for regular marijuana use; although no one of these declines was statistically significant taken alone, the consistency across all four groups suggests that the shift was real. Since then the declines have continued, though somewhat erratically; but all four age groups showed substantial declines between 2006 and 2015 in perceived risk for regular marijuana use, suggesting a possible period effect. Indeed, the age bands 18, 23-26, and 27-30 all showed significant one-year declines in perceived risk, from 2014 to 2015.

- Young adults (ages 19–30) viewed experimental use of any of the ***other illicit drugs*** as distinctly riskier than the experimental use of marijuana. About 32–34% of young adults thought trying ***sedatives (barbiturates)*** involved great risk; the corresponding figures were 32–35% for ***amphetamines,*** 38–48% for ***LSD,*** 46–51% for ***narcotics other than heroin,*** 48–55% for ***ecstasy (MDMA),*** 49–53% for ***cocaine powder,*** and 70–75% for ***heroin.*** Note that three classes of prescription drugs have among the lowest levels of perceived risk among this set. (Perceived risk of tranquilizers is not asked, but likely would rank low as well.)

- Items about perceived risk of ***synthetic marijuana*** use were added to the questionnaires in 2012 (Figures 6-4 and 6-5). These drugs are sold over the counter in small packets containing plant material that has been sprayed with any number of chemicals with chemical structures similar to cannabinoids The percent seeing great risk in trying synthetic marijuana in the three young adult age bands were 29–31% in 2012 and 37-40% in 2015, reflecting a clear increase in perceived risk in all four age groups over that three-year interval.

- The older age groups have been more likely to see ***LSD*** as dangerous (Figures 6-6 and 6-7). These age distinctions became sharper through about 2001 for experimental use, as perceived risk declined more in the younger age groups—again indicating some important cohort changes in these attitudes, quite likely as a result of generational forgetting of the dangers of LSD. The distinctions continued to grow for regular LSD use through 2015 as perceived risk among the 18-year-olds continued a long-term decline.

- Questions about perceived risk of ***MDMA (ecstasy*** and, more recently, ***Molly)*** were introduced in the follow-up surveys in 1989, but were not asked of 12th graders until 1997 (due to concerns about introducing the secondary school students to a drug with such an

alluring name). (See Figures 6-18 and 6-19.) At the beginning of the 1990s, all young adult age groups viewed ecstasy as a fairly dangerous drug, even for experimentation. But, again, the different age bands showed diverging trends during the 1990s, with the oldest two age bands continuing to see ecstasy as quite dangerous, but the 19- to 22-year-olds (and very likely the 12th graders, for whom we did not have data until 1997) coming to see it as less so. In 2000, 38% of 12th graders saw great risk in trying ecstasy versus 49% of 27- to 30-year-olds; in 2001, the corresponding figures were 46% and 54%. In fact, three of the four age groups showed appreciable increases in perceived risk for ecstasy in 2001, which led us to predict a decline in use. The increase in perceived risk continued in 2002 in the two youngest age strata, and their use of ecstasy did, indeed, begin to decline—and decline sharply (see chapter 5). Perceived risk for using once or twice continued to rise among 18-year-olds and they exceeded the levels seen in the other age bands from 2004 through 2009, after which all of the age bands converged (Figure 6-18).

- Perceived risk for ***salvia*** (Table 6-1) also was included for the first time in 2012 in the young adult questionnaires, and the percent seeing great risk in trying salvia ranged from 19% to 23% among the young adults in 2012 and from 22% to 24% in 2015 (Table 6-1).

- Recent years showed little systematic change in perceived risk for ***cocaine*** use among young adults and not a great deal of difference in this belief among the different age groups (Figure 6-11). A decline in perceived risk began among 19- to 22-year-olds after 1994, among 23- to 26-year-olds after 1997, and among 27- to 30-year-olds after 2001. Young adults generally reported somewhat higher perceived risk with respect to regular cocaine use than did 12th graders. The age differences were smaller for occasional and experimental use. Since the early 1990s, perceived risk for regular use of cocaine gradually declined among 12th graders, likely due to generational forgetting of the dangers of this drug, and resulted in an increasing gap between them and the older age groups.

 Between 1980 and 1986, among 12th graders and the young adult age groups, the danger associated with using cocaine on a regular basis grew considerably --by 13 and 17 percentage points, respectively. Interestingly, these changed beliefs did not translate into changed behavior until the perceived risk associated with experimental and occasional use began to rise sharply after 1986. When these two measures rose, a sharp decline in actual use occurred. We hypothesized that respondents saw only these lower levels of use as relevant to them and, therefore, saw themselves as vulnerable only to the dangers of such use. (No one starts out planning to be a heavy user; further, in the early 1980s, cocaine was not believed to be addictive.) Based on this hypothesis, we included the additional question about occasional use in 1986, just in time to capture a sharp increase in perceived risk later that year. This increase occurred largely in response to the growing media frenzy about cocaine—and crack cocaine, in particular—and to the widely publicized, cocaine-related deaths of several public figures (most notably Len Bias, a collegiate basketball star and a leading National Basketball Association draft pick). After stabilizing for a few years, perceived risk began to fall off around 1992 among 12th graders, but not among the older age groups—again suggesting that lasting cohort differences were emerging. Now, almost 30 years later, none of the young adult age groups has had much exposure to the cocaine epidemic of the mid-1980s, which likely explains why there no longer is much age-related

difference in the level of perceived risk, except with regards to regular use, for which 12th graders have a lower level of perceived risk than any of the young adult strata (Figure 6-11).

- Perceived harmfulness of ***crack*** use has been lowest among 12th graders for some years now (Figures 6-12 through 6-14). High school seniors have been considerably less likely than any of the older age groups to view occasional and regular use of crack cocaine as dangerous, strongly suggesting that an age-effect may have been operating here. Trend data (available since 1987) on the risks perceived to be associated with crack use showed increases in 1987–1990 for all age groups, followed by relatively little change in the older age strata. During the 1990s, twelfth graders showed decreases in the perceived risk of experimental use of crack—perhaps reflecting the onset of generational forgetting of its dangers—leaving them as perceiving considerably less risk than the older groups. The young adult age groups showed a staggered decline in this measure, with 19- to 22-year-olds showing a decline after 1994, 23- to 26-year-olds since 1996, and 27- to 30-year-olds after 2001. As a result, the several ages differed more in their levels of perceived risk of crack use, until declines in the older age groups after about 2002. Given this lack of recent historical or age variation, questions about perceived risk of crack use were dropped from the young adult questionnaires in 2012 to make room for such questions about other drugs.

- Perceived risk for trying ***amphetamines*** (Figure 6-23) increased in all four age strata very gradually from 1980, when first measured, through 2010, with little difference among them. In 2011 it dropped in all strata and then held level thereafter. There was more difference among the age groups with regard to the risk attached to regular amphetamine use (Figure 6-24) with the older two strata generally seeing greater risk than the younger two strata, and especially the 12th graders. The younger two strata showed an increase in perceived risk during the 1980s and then some fallback in the early 1990s, before stabilizing. The sharp recent decline observed for experimental use was also seen for regular use from 2009 to 2011 among 12th graders and from 2011 through 2012 among all of the young adult strata.

- Perceived risk questions for ***Adderall*** were added to the young adult questionnaires for the first time in 2012. They showed that perceived risk of using once or twice ranged from 29% to 30% in the three young adult age bands in 2012. In 2013 and 2014 perceived risk rose some in all young adult age strata, but then declined some in 2015 (Table 6-1).

- Measures of perceived risk of ***crystal methamphetamine (ice)*** use (Figure 6-25) were introduced in 1990, and the results showed what might be an important reason for its lack of rapid spread. More than half of all 12th graders and young adults perceived it as quite dangerous even to try, perhaps because it was likened to crack in many media accounts. (Both drugs come in crystal form, both are burned and the fumes inhaled, both are stimulants, and both can produce a strong dependence.) There was rather little age-related difference in perceived risk associated with use of crystal methamphetamine in 1990 and 1991, although the two youngest age groups were somewhat higher. But as perceived risk fell considerably among 12th graders (and eventually among 19- to 22-year-olds) and held steady or rose in the oldest two age groups, an age-related difference emerged. Twelfth

graders have fairly consistently had the lowest level of perceived risk since 2003. Since about 2003 or 2004, perceived risk has risen some among all of the age strata, narrowing the age-related differences that had emerged for a few years. In 2011 perceived risk for trying this drug stood at 67% among 12th graders and at 73–75% in all of the older strata. Given this lack of variation in recent years and low levels of actual use, these questions were discontinued in the young adult (but not in the secondary school) surveys in 2012 to make room for such questions about other drugs.

- In 2012 perceived risk questions about the use of ***bath salts***—over-the-counter synthetic stimulants—were added to the questionnaires (Table 6-1). That year fairly high proportions of the young adults saw great risk of harm in even trying bath salts (45-49%), but considerably fewer of the 18-year-olds did (33%). Perceived risk has increased dramatically for bath salts in all four age strata, with increases ranging from 24 percentage points among 12th graders to 21 to 23 percentage points in the three young adult age strata. In 2015 even trying bath salts once or twice was seen as dangerous by between 65% and 72% in the young adult age strata—very high levels. (Some of this shift occurred because fewer respondents chose the "Can't say, drug unfamiliar" option, suggesting that more of them were familiar with the drug and the risks associated with it.)

- Young adults have been more cautious than 12th graders about ***heroin*** use. (See Figures 6-20 through 6-22.) In general, there has been relatively little change over the years in the proportions of all age groups seeing regular heroin use as dangerous, with the great majority of each group (over 85%) consistently holding this viewpoint. (There was some increase in recent years among the older groups.) However, there was a long-term gradual rise in all age strata with regard to heroin experimentation. From 1975 to 1986 there had been a downward shift among 12th graders in the proportion seeing great risk associated with trying heroin and some decline among 19- to 22-year-olds. Following this decline (although their data did not extend back as far), young adults showed a gradually increasing caution about heroin use in the latter half of the 1980s—possibly due to the association of heroin injection with the spread of HIV—followed by a leveling through most of the 1990s. In 1996 and 1997, young adults' perceived risk increased some, as happened among 12th graders (as well as among 8th and 10th graders). These various trends could reflect, respectively, (a) the lesser attention paid to heroin by the media during the late 1970s and early 1980s as cocaine took center stage; (b) the subsequent great increase in attention paid to intravenous heroin use in the latter half of the 1980s due to the recognition of its importance in the spread of HIV/AIDS; (c) the emergence in the 1990s of heroin so pure that people no longer needed to use a needle to administer it; and (d) the subsequent increased attention given to heroin by the media (partly as a result of some overdose deaths by public figures and partly prompted by the emergence of "heroin chic" in the design industry), as well as through an anti-heroin media campaign launched by the Partnership for a Drug-Free America in June 1996. In 2015, as in all previous years, more young adults than 12th graders saw heroin use as dangerous (Figure 6-18); and this difference has grown some since the early 1990s with regard to regular use.

- Perceived risk questions about ***narcotics other than heroin*** without medical supervision were first asked of the young adults in 2012; between 43% and 47% of the three age groups

saw great risk of harm in experimenting with such drugs. Little has changed since them, with rates ranging between 44% and 51%. None of the one-year changes have been significant since then (Table 6-1). Many more see regular use as having great risk of harm (between 74% and 76% in 2015) with rather little systematic change since 2012.

- In 2015, a minority of young adults saw ***occasions of heavy drinking*** on weekends as dangerous (41–42%), as did a slightly larger proportion of 12th graders (47%; Figure 6-31). The belief that heavy drinking carries great risk increased over the 1980s in these age groups, rising among 12th graders from 36% in 1980 to 49% in 1992. Among 19- to 22-year-olds, it rose from a low of 30% in 1981 to 42% in 1992; the increases among the older groups were smaller. The increase in this belief could well help to explain the important decline in actual heavy drinking, and could in turn be explained by the media campaigns against drunk driving and the increase in the drinking age in a number of states.[2] Following a staggered pattern, perceived risk of harmfulness reached a peak among 18-year-olds in 1992, among 19- to 22-year-olds in 1993, among 23- to 26-year-olds in 1994, and among 27- to 30-year-olds in 1995, suggesting some cohort effect in this important belief. It also appears that this cohort effect followed a period effect that took place earlier in the 1980s. Since 1998, perceived risk of heavy drinking has not changed much among the 19–30 age groups but has risen slightly among the 18-year-olds.

- Between 1980 and 1991, a gradually increasing proportion of all four age groups viewed drinking ***one or two drinks per day*** as dangerous (Figure 6-29); but then they all showed a parallel decrease in perceived risk for this behavior through at least 2000. It seems likely that the earlier increase was due to the general rising concern about the consequences of alcohol use, particularly drunk driving, and that the subsequent decline in perceived risk was due to increasing reports of cardiovascular health benefits of light-to-moderate daily alcohol consumption. Since about 2001 there has been little systematic change in this belief in any of the age strata, and there has been little difference by age across the entire 35-plus-year interval. However, since 2006, 18-year-olds have seen the most risk from daily drinking.

- In 2015, more than four fifths (84–86%) of young adults perceived regular ***pack-a-day cigarette smoking*** as entailing high risk (Figure 6-32). In recent years, 18-year-olds consistently showed lower perceived risk than young adults did, while 10th graders were still lower and 8th graders lowest. Clearly, there is an age effect in young people coming to understand the dangers of smoking. Unfortunately, it appears that much of the learning about the risks of smoking happens *after* a great deal of smoking initiation has occurred and many young people have already become addicted. These beliefs about smoking risks have strengthened very gradually in all age groups from senior year forward during the years we have monitored them (see Table 6-1 and Figure 6-32). The parallel changes in these beliefs across the different age groups indicate a period effect, suggesting that all of the age groups responded to common influences in the larger culture. These influences are

[2]See O'Malley, P. M., & Johnston, L. D. (1999). Drinking and driving among U.S. high school seniors: 1984–1997. American Journal of Public Health, 89, 678–684; O'Malley, P. M., & Johnston, L. D. (2003). Unsafe driving by high school seniors: National trends from 1976 to 2001 in tickets and accidents after use of alcohol, marijuana and other illegal drugs. *Journal of Studies on Alcohol, 64,* 305–312; and O'Malley, P. M., & Johnston, L. D. (2013). Driving after drug use or alcohol use by American high school seniors, 2001-2011. *American Journal of Public Health, 103*(11), 2027-2034. doi:10.2105/AJPH.2013.301246

discussed at length in *Volume I* in chapter 8 on attitudes and beliefs. The rise in perceived risk slowed between 2002 and 2011, with only slight increases, mainly in the two youngest age strata. Changes since 2011 have been minimal.

- The regular use of ***smokeless tobacco*** is seen as dangerous by 47–57% of young adults and 39% of 12th graders. These beliefs gradually strengthened from 1986 through about 2001 in all age groups covered (Table 6-1), particularly among the two older age groups. As with cigarettes, the change appears to reflect a secular trend (period effect) because of its parallel occurrence in all age groups. Perceived risk has not changed among the young adults in any systematic fashion since 2001; these data are based on only one form, so year-to-year fluctuations can appear relatively large. There was a considerable difference across age groups in 2015, with 39% of 18-year-olds seeing great risk in regular smokeless tobacco use compared to 47% to 57% of the three young adult strata.

PERSONAL DISAPPROVAL OF DRUG USE

For most of the life of the study, follow-up respondents were asked the same questions asked of 12th graders in one of the six questionnaire forms concerning the extent to which they personally disapprove of various drug-using behaviors among "people (who are 18 or older)." Trends in the answers of young adults in the age bands of 19 to 22, 23 to 26, and 27 to 30 are contained in Table 6-2. Comparison data for 12th graders are also provided for 1980 onward. (See Table 8-6 in *Volume I* for the longer term trends in 12th graders' levels of disapproval associated with using the various drugs.) As with the perceived risk questions, starting in 2012 the estimates were based on all questionnaire forms on which each disapproval question was located in order to increase sample size and, therefore, reduce sampling error. Each question is footnoted in Table 6-2 to indicate on how many forms it was contained in 2012 and thereafter.

- In general, disapproval levels of adult use of the various drugs ranked similarly across substances for both 12th graders and young adults. The great majority of young adults disapproved of using, or even experimenting with, all of the ***illicit drugs other than marijuana.*** For example, 95% or more of young adults in 2015 disapproved of regular use of each of the following drugs: ***LSD, cocaine, heroin,*** and ***sedatives (barbiturates).*** Fully 76% to 97% of young adults disapproved of even experimenting with each of these same drugs. Many of these attitudes differed rather little as a function of age in 2015.

- Even for ***marijuana,*** slightly more than a third of young adults disapproved of experimentation (33–37%), about half (47–50%) disapproved of occasional use, and more than two-thirds (70–72%) still disapproved of regular use in 2015.

 Among drugs measured, marijuana use has shown the widest fluctuations in disapproval over time—generally, fluctuations that parallel the changes in perceived risk (though sometimes with a one-year lag, with the change in perceived risk coming first). The most fluctuation has occurred among the younger age groups (Table 6-2). Among 12th graders, disapproval of regular marijuana use increased substantially in the 1980s, peaked in the early 1990s, declined some in the 1990s, and then leveled around 1998 with little change for some years thereafter. Since 2009, however, they have shown a fair decline in disapproval, falling from 80% in 2009 to 71% in 2015. The 19- to 22-year-olds had a quite

similar pattern, though the decline continued a year longer, likely due to generational replacement, with a recent decline from 81% in 2009 to 71% in 2015. Among 23- to 26-year-olds, some declines started later in the 1990s but were modest until about 2007, when disapproval of regular marijuana use fell from 85% to 70% in 2015. Thus since 2007 there has been a considerable decline in disapproval of occasional and regular marijuana use in all four age groups; the pattern is consistent with a secular trend, which would alert us to a possible increase in marijuana use. Indeed, such an increase in use was occurring among both 12th graders and 19- to 28-year-olds during much of this historical period (see Table 2-2).

- In all four age groups from high school seniors to age 30, the great majority has disapproved of even experimenting with ***LSD*** since 1980, when these data were first available. Beginning around 1990, all age groups decreased some in their disapproval of trying LSD (starting from high levels of disapproval at 90–91%). The decline was steepest among 12th graders, but there was a reversal in this group's disapproval in 1997, and then an increase through 2006. Disapproval in the older age groups declined less and in staggered fashion; this trend showed some evidence of a reversal among 19- to 22-year-olds and 23- to 26-year-olds since 2001 and 2002, respectively. The pattern again suggested lasting cohort differences in these attitudes. Disapproval levels fluctuated in recent years but after recent consecutive declines are now somewhat lower in 2015 than they were in 2002. Disapproval of regular LSD use has been near the top of the scale for more than three decades, ranging from 92% to 99%.

- First measured among young adults in 2001, disapproval of ***ecstasy*** use was positively associated with age in the early 2000s. In 2001 disapproval of even trying ecstasy was quite high, and from 2001 to 2010, disapproval rose to even higher levels in all age groups, with little systematic change since then. Due to the advent of Molly—reputedly a stronger form of MDMA than ecstasy—the question was changed to MDMA in 2015 with both ecstasy and Molly given as examples. Experimenting with MDMA was disapproved of by 85% of 12th graders in 2015 and by roughly similar proportions in the upper ages; and there was no evidence that the addition of Molly as an example had the effect of raising the perceived risk level, as might have been expected. Indeed, there was a non-significant decline in perceived risk in 2015 for occasional use.

- Disapproval of all three levels of ***heroin*** use (experimental, occasional, and regular use) has remained very high and fairly stable since MTF began, though there was a very gradual increase in disapproval in all age strata from the mid-1980s through around 2005, followed by a leveling. There was one minor exception, however: A little slippage in disapproval of experimental use occurred among 12th graders from 1991 through 1996 (from 96% to 92%)—a period during which heroin usage rates were rising.

- Disapproval of regular ***cocaine*** use rose gradually among 19- to 22-year-olds, from 89% in 1981 to 99% in 1990, with little change thereafter (98% in 2015). (See Table 6-2.) In fact, all three young adult age bands were near 100% in disapproving of regular use in 2015. Disapproval of experimental cocaine use increased during the 1980s, peaking first among 12th graders at 94% in 1991. It then peaked in 1995 among 19- to 22-year-olds (at

94%) and 23- to 26-year-olds (at 92%). Finally, it peaked in 1999 at 90% among 27- to 30-year-olds, suggesting both a period and a cohort effect at work. All age groups had some modest falloff in disapproval since those peak levels were attained. For the last few years, all age groups' disapproval of experimental cocaine use has ranged from 79–92%, with some reduction in disapproval across increasing ages.

- Disapproval of experimenting with ***amphetamines*** rose in the 1980s as use was falling; thereafter, disapproval leveled at above 80%, with almost no difference among the age strata. For example, trying amphetamines once or twice was disapproved of by 73–74% of 19- to 26-year-olds in 1984, compared to 84% by 1990. After a long period of level disapproval, all strata showed a slight drop in disapproval in 2011, followed by another leveling, followed by another sharp drop of 10 percentage points in 2014 among 19- to 22-year-old age group, which contains most of the college students. Disapproval of regular use started out very high among all age strata in the early 1980s and rose even higher by the early 1990s, where it remained for all age strata until 2011; after that there was a slight decline, but a leveling by 2012. Since 2010 there has been some decline in disapproval of amphetamine use in all four age groups, likely explained by a change in the question wording. Adderall and Ritalin were included in the question for the first time in 2011 as examples of amphetamines. There had been very little difference among the various age strata in either their levels or trends in disapproval until the significant decline in 2014, which brought the college-age group (19- to 22-year-olds) considerably below the other age groups in their disapproval of experimenting with amphetamines. In 2015 age gaps among the three young adult strata were largely closed (at 75% to 76%) when the older two strata showed declines in disapproval and the 19- to 22-year-olds showed some increase (all non-significant changes). In 2015 the 12th graders showed the highest level of disapproval of experimental use (at 81%).

- Disapproval of experimental use of ***sedatives (barbiturates)*** has moved very much in parallel with that for amphetamines**.** Disapproval increased significantly during the 1980s, accompanied by declining use. Disapproval of trying sedatives was at 84–85% in 1984 compared to 89–91% by 1990. Disapproval of sedative use slipped some among 12th graders after 1992 and among 19- to 22-year-olds after 1994, with the 23- to 26-year-olds following suit after 1996, and the 27- to 30-year-old stratum in 2004. This pattern of staggered change again suggests cohort effects, reflecting lasting cohort differences in these attitudes. In recent years a gradual, staggered increase in disapproval of trying sedatives has shown up in all age groups; in 2015 it stood between 81% and 86%, while disapproval of regular use was close to 100%.

- The story for ***alcohol*** is quite an interesting one, in that changes in the minimum drinking age seem to have led to modest changes in norms for the affected cohorts. Between 1980 and 1992, an increasing proportion of 12th graders favored *total abstention*; the percent who disapproved of drinking even just once or twice rose from 16% in 1980 to 33% in 1992. This figure fell back slightly and stood at 29% in 2015. Among 19- to 22-year-olds there was a modest increase in disapproving of any use between 1985 and 1989 (from 15% to 22%), where it held for some years; it remained at 18% in 2015. For the two oldest age groups, there has been rather little change in these attitudes so far. These differing trends

may reflect the fact that during the 1980s, the drinking age was raised in a number of states so that by 1987 it was 21 in all states; this change would have had the greatest effect on 12th graders, who may have incorporated the legal restrictions into their normative structure and, as they entered young adulthood, brought these new norms with them. But the changes may be exhibited only among respondents in the cohorts that were underage after the time that the new law raising the minimum drinking age went into effect.

Disapproval of ***light daily drinking*** (one or two drinks) has not shown any such cohort effects, because all age groups have generally moved in parallel, at similar levels of disapproval. The three youngest age bands (which include 12th graders through 26-year-olds) showed an increase in disapproval of daily drinking up until about 1990 suggesting some secular trending (little data were yet available on the oldest age group), but disapproval has declined a fair amount in all of the age groups since then. A bit of a gap between 12th graders and young adults opened up between 2004 and 2008, when 12th graders showed increased disapproval of daily drinking while young adults did not. The pattern of cross-time changes in disapproval of ***heavy daily drinking*** (having four or five drinks nearly every day) closely parallels what was observed for the perceived risk associated with light daily drinking, discussed previously, though the level of disapproval was much higher as would be expected; the later decline in both variables among the young adults may well be due to widely publicized reports that some cardiovascular benefits may result from having one or two drinks per day.

- There was a considerable increase in disapproval of ***occasions of heavy drinking (***also called ***binge drinking)*** on weekends from the early 1980s for the two youngest age groups, and this continued through 1992 for 12th graders (who then showed some drop-off) and through 1996 among 19- to 22-year-olds (who then also showed some drop-off). As Figure 5-20d illustrates, the prevalence of occasions of heavy drinking declined substantially among 12th graders and 19- to 22-year-olds between 1981 and the early 1990s, as norms became more restrictive. There was little or no change in the older age strata, either in their levels of disapproval or in their rates of occasions of heavy drinking, until the early 2000s, when disapproval began to drop some in both strata, before a long, gradual increase set in among the 18-year-olds. In 2015, 72% of 12th graders disapproved of weekend binge drinking, as did between 63% and 67% in the three young adult age groups.

- Some fluctuations in the disapproval of ***cigarette smoking*** occurred over the decades covered by MTF. Twelfth graders showed some increase in disapproval of pack-or-more-a-day smoking between 1982 (69%) and 1992 (74%). Their disapproval then fell through 1997 (to 67%) as their smoking increased; disapproval then increased for several years (to 82% in 2006) before leveling, as smoking declined. In 2015, 84% disapproved of pack-or-more-a-day smoking. The 19- to 22-year-olds showed a similar increase in disapproval from 66% in 1982 to 83% in 2015. All four age strata showed some upward drift in their level of disapproval of smoking since about 1999 (reaching 80–84% in 2015), suggesting a secular change in attitudes during this period.

COHORT DIFFERENCES AND THEIR IMPLICATIONS FOR PREVENTION AND THEORY

An important theoretical point to be made—based on the strong evidence reported here for cohort effects in perceived risk and disapproval of many of the drugs under study—is that among the causes of cohort differences in actual use are lasting cohort differences in these critical *attitudes* and *beliefs.* In other words, *the attitudes and beliefs brought into adulthood from adolescence tend to persevere and continue to shape individual and population drug use over the life course.*

A second point has to do with the causes of these attitudinal cohort effects. We noted earlier that the older respondents are more likely than the younger ones to see as dangerous the use of marijuana, LSD, heroin, amphetamines, ecstasy, crystal methamphetamine, cocaine, crack, and sedatives (barbiturates). We have offered the framework for a theory of drug epidemics in which direct learning (from personal use) and vicarious learning (from observing use by others in both the immediate and mass media environments) play important roles in changing these key attitudes.[3] To the extent that the data on perceived risk represent cohort effects (enduring differences between class cohorts), these findings would be consistent with this theoretical perspective. Clearly, use of these particular drugs was greater when the older cohorts were growing up, and public attention and concern regarding the consequences of these drugs were greatest in the 1970s and early to mid-1980s. In the early 1970s, LSD was alleged to cause brain and chromosomal damage, as well as bad trips, flashbacks, and behavior that could prove dangerous. Methamphetamine use was discouraged with the slogan "speed kills." In the early 1980s there was an epidemic of cocaine use, and it reached a pinnacle in 1986 with the widely reported deaths of sports stars and others from cocaine. In addition, there was an epidemic of heroin use in the early 1970s. Later cohorts (through the mid-1990s, at least) were not exposed to those experiences while growing up. While there may have been a secular trend toward greater perceived risk for drugs in general, in the case of LSD there may have also been an operating cohort effect (with younger cohorts seeing less danger) offsetting the secular trend among 12th graders; the net effect was a decrease in 12th graders' perceived risk of LSD use after 1980.

This vicarious learning explanation has a very practical implication for national strategy for preventing future epidemics. Because fewer in their immediate social circles and fewer public role models may be using these drugs and exhibiting the adverse consequences of use during certain historical periods, future cohorts of youth may have less opportunity to learn about the adverse consequences of these drugs in the normal course of growing up. Unless those hazards are convincingly communicated to them in *other ways*—for example, through school prevention programs, by their parents, and through the mass media, including public service advertising—they will become more susceptible to a new epidemic of use of the same or similar drugs.

In *Volume I*, we reported an increase in use of several drugs in 8th, 10th, and 12th grades in 1994 through 1997. This increase suggests that this form of generational forgetting may well have been taking place during those years. For the cohorts that follow such a rise in use, there is once again an increased opportunity for vicarious learning from the adverse experiences of those around them, but by that time, members of affected cohorts have had to learn the hard way what consequences

[3]Johnston, L. D. (1991). Toward a theory of drug epidemics. In L. Donohew, H. E. Sypher, & W. J. Bukoski (Eds.), Persuasive communication and drug abuse prevention (pp. 93–131). Hillsdale, NJ: Lawrence Erlbaum. Available at http://monitoringthefuture.org/pubs/chapters/ldj1991theory.pdf..

await those who become involved with the various drugs. In the 2000s we have seen drug use subside to some degree, which once again has created the conditions for generational forgetting of the dangers of many of these drugs. We are now seeing some softening of attitudes among teens regarding marijuana, ecstasy, and cocaine, which suggests a real possibility of future increases in use.

TABLE 6-1
Trends in Harmfulness as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

Percentage saying "great risk" [a]

Q. How much do you think people risk harming themselves (physically or in other ways), if they . . .	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Try marijuana once or twice [f]	18	10.0	13.0	11.5	12.7	14.7	14.8	15.1	18.4	19.0	23.6	23.1	27.1	24.5	21.9	19.5	16.3	15.6	14.9
	19–22	8.3	7.8	9.7	9.7	12.8	11.2	13.0	12.9	16.8	16.9	17.8	19.1	19.7	19.4	18.8	13.3	16.9	14.8
	23–26	—	—	—	—	9.6	10.0	12.4	14.5	16.0	14.0	17.7	14.0	15.0	13.0	15.0	15.8	18.5	15.1
	27–30	—	—	—	—	—	—	—	—	14.6	16.0	17.0	15.7	15.1	14.0	14.8	16.1	16.2	16.1
Smoke marijuana occasionally [f]	18	14.7	19.1	18.3	20.6	22.6	24.5	25.0	30.4	31.7	36.5	36.9	40.6	39.6	35.6	30.1	25.6	25.9	24.7
	19–22	13.9	14.2	16.9	16.7	21.7	20.6	22.4	23.0	28.7	29.1	30.1	30.2	29.5	30.3	31.3	25.5	25.6	22.0
	23–26	—	—	—	—	15.8	16.3	20.9	20.8	26.8	25.3	30.4	26.2	27.4	24.0	25.5	27.7	27.3	26.4
	27–30	—	—	—	—	—	—	—	—	24.2	25.7	28.7	27.4	27.5	26.8	28.1	28.3	28.1	26.0
Smoke marijuana regularly [f]	18	50.4	57.6	60.4	62.8	66.9	70.4	71.3	73.5	77.0	77.5	77.8	78.6	76.5	72.5	65.0	60.8	59.9	58.1
	19–22	43.9	47.8	52.4	58.4	62.2	66.8	67.6	69.4	72.4	74.9	73.0	75.0	69.3	69.2	65.0	62.1	61.3	60.7
	23–26	—	—	—	—	52.9	57.5	59.4	65.3	68.3	72.1	71.0	70.9	67.3	64.1	63.2	64.2	62.7	64.1
	27–30	—	—	—	—	—	—	—	—	67.5	69.1	69.2	67.5	68.8	69.4	65.6	69.2	67.3	65.0
Try synthetic marijuana once or twice [g]	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take synthetic marijuana occasionally [g]	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try LSD once or twice [h]	18	43.9	45.5	44.9	44.7	45.4	43.5	42.0	44.9	45.7	46.0	44.7	46.6	42.3	39.5	38.8	36.4	36.2	34.7
	19–22	44.8	44.4	45.0	44.7	46.0	44.3	47.6	49.4	49.2	49.5	49.3	48.0	45.6	42.4	42.3	40.3	44.4	40.1
	23–26	—	—	—	—	48.3	46.9	47.9	51.5	53.7	50.7	52.0	50.1	49.7	49.0	46.8	45.8	46.1	46.6
	27–30	—	—	—	—	—	—	—	—	53.3	55.6	54.6	52.5	53.0	51.5	53.5	52.5	50.1	52.0
Take LSD regularly [h]	18	83.0	83.5	83.5	83.2	83.8	82.9	82.6	83.8	84.2	84.3	84.5	84.3	81.8	79.4	79.1	78.1	77.8	76.6
	19–22	83.4	85.3	86.2	86.0	84.5	86.4	87.1	85.6	85.4	85.5	85.8	86.6	87.0	81.3	81.0	80.5	82.4	83.6
	23–26	—	—	—	—	89.0	86.6	88.7	90.0	89.2	89.0	88.2	89.1	87.3	85.3	87.5	86.3	84.7	85.6
	27–30	—	—	—	—	—	—	—	—	89.1	91.2	92.0	87.1	88.5	89.0	89.2	88.4	87.0	87.2
Try PCP once or twice [h]	18	—	—	—	—	—	—	—	55.6	58.8	56.6	55.2	51.7	54.8	50.8	51.5	49.1	51.0	48.8
	19–22	—	—	—	—	—	—	—	63.6	63.8	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	—	—	—	64.8	63.2	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	65.9	—	—	—	—	—	—	—	—	—
Try ecstasy (MDMA) once or twice [h]	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	33.8
	19–22	—	—	—	—	—	—	—	—	—	45.2	47.1	48.8	46.4	45.0	51.1	48.3	46.7	45.5
	23–26	—	—	—	—	—	—	—	—	—	49.5	47.2	47.4	45.5	41.9	50.6	49.3	50.4	50.5
	27–30	—	—	—	—	—	—	—	—	—	44.9	48.7	47.7	44.2	51.7	47.3	50.0	50.6	48.8
Take ecstasy (MDMA) occasionally [h]	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try salvia once or twice [d,k]	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take salvia occasionally [k]	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try cocaine once or twice [h]	18	31.3	32.1	32.8	33.0	35.7	34.0	33.5	47.9	51.2	54.9	59.4	59.4	56.8	57.6	57.2	53.7	54.2	53.6
	19–22	31.4	30.4	33.3	28.7	33.1	33.2	35.5	45.9	51.9	51.5	58.1	58.7	56.1	60.5	63.8	57.7	61.9	55.5
	23–26	—	—	—	—	31.3	31.1	35.9	48.0	47.1	51.3	51.5	50.5	53.5	54.1	56.0	58.7	57.2	63.1
	27–30	—	—	—	—	—	—	—	—	45.3	53.0	51.6	52.6	51.8	54.7	53.5	56.4	53.6	54.6
Take cocaine occasionally [h]	18	—	—	—	—	—	—	54.2	66.8	69.2	71.8	73.9	75.5	75.1	73.3	73.7	70.8	72.1	72.4
	19–22	—	—	—	—	—	—	53.8	61.3	67.1	72.6	74.6	72.6	74.9	75.4	78.0	73.4	76.6	76.1
	23–26	—	—	—	—	—	—	50.9	62.6	63.2	69.9	69.9	70.3	69.9	72.8	70.3	76.0	71.3	76.5
	27–30	—	—	—	—	—	—	—	—	62.6	66.6	66.6	69.1	69.9	69.1	69.9	70.0	67.8	73.8
Take cocaine regularly [h]	18	69.2	71.2	73.0	74.3	78.8	79.0	82.2	88.5	89.2	90.2	91.1	90.4	90.2	90.1	89.3	87.9	88.3	87.1
	19–22	65.2	69.3	71.5	75.2	75.1	82.9	82.0	88.0	90.3	89.1	93.9	93.5	92.9	91.7	92.2	91.5	92.2	91.6
	23–26	—	—	—	—	75.6	76.9	83.0	88.9	90.9	91.2	91.2	92.7	89.9	91.9	92.6	93.3	90.6	93.2
	27–30	—	—	—	—	—	—	—	—	88.9	92.0	91.4	90.9	92.0	91.6	92.1	91.3	91.6	92.7

(Table continued on next page.)

TABLE 6-1 (cont.)
Trends in Harmfulness as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

Percentage saying "great risk" [a]

Q. How much do you think people risk harming themselves (physically or in other ways), if they . . .	Age Group	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Try marijuana once or twice [f]	18	16.7	15.7	13.7	15.3	16.1	16.1	15.9	16.1	17.8	18.6	17.4	18.5	17.1	15.6	14.8	14.5	12.5	12.3	-0.2
	19–22	13.4	12.5	14.3	11.9	13.3	17.1	15.3	15.6	14.4	10.8	17.4	13.2	16.8	13.4	12.9	11.8	9.3	10.6	+1.3
	23–26	16.7	16.4	13.1	13.0	15.1	15.3	13.6	13.0	13.9	13.0	12.5	10.6	12.7	10.5	10.1	9.7	9.6	9.5	-0.1
	27–30	16.4	16.1	14.4	17.3	16.2	18.0	13.8	14.5	14.5	16.6	11.4	12.3	11.5	12.4	12.5	10.2	8.8	7.9	-1.0
Smoke marijuana occasionally [f]	18	24.4	23.9	23.4	23.5	23.2	26.6	25.4	25.8	25.9	27.1	25.8	27.4	24.5	22.7	20.6	19.5	16.4	15.8	-0.6
	19–22	22.0	19.8	25.8	18.0	21.0	24.1	23.2	24.3	22.1	22.3	23.6	23.1	19.9	19.6	20.6	19.1	15.4	15.6	+0.2
	23–26	26.8	26.4	24.9	20.5	24.5	22.2	22.7	21.6	22.3	20.2	18.5	18.1	19.3	15.5	17.1	14.4	14.8	13.7	-1.0
	27–30	25.8	25.3	25.8	25.0	30.2	27.9	25.1	24.8	21.8	25.6	21.6	21.7	18.6	19.3	19.7	16.0	14.8	12.1	-2.7 s
Smoke marijuana regularly [f]	18	58.5	57.4	58.3	57.4	53.0	54.9	54.6	58.0	57.9	54.8	51.7	52.4	46.8	45.7	44.1	39.5	36.1	31.9	-4.2 s
	19–22	53.4	55.2	58.0	49.6	56.7	57.8	57.2	55.3	54.5	50.4	51.6	46.4	49.8	43.0	43.5	39.4	35.1	33.3	-1.8
	23–26	62.7	60.1	60.3	55.1	53.7	56.7	54.2	53.6	55.9	52.5	52.4	43.0	47.1	39.3	40.1	35.9	34.5	30.6	-3.9 s
	27–30	63.6	66.1	64.0	61.7	63.5	64.7	59.3	57.0	54.9	51.5	51.2	47.4	48.5	42.2	43.5	40.3	35.3	30.6	-4.6 ss
Try synthetic marijuana once or twice [g]	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	23.5	25.9	32.5	33.0	+0.5
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30.6	33.1	36.1	39.3	+3.1
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	29.1	29.4	38.5	40.4	+1.9
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	28.9	32.7	35.1	37.3	+2.2
Take synthetic marijuana occasionally [g]	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	32.7	36.2	39.4	40.9	+1.5
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	38.5	40.1	44.5	47.6	+3.1
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	37.3	38.6	47.2	49.5	+2.3
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	36.3	41.0	43.1	46.6	+3.5
Try LSD once or twice [h]	18	37.4	34.9	34.3	33.2	36.7	36.2	36.2	36.5	36.1	37.0	33.9	37.1	35.6	34.7	33.1	34.9	35.5	33.2	-2.3
	19–22	38.7	38.1	37.9	37.5	35.3	39.7	39.2	38.7	43.5	40.9	46.5	38.5	40.9	43.5	43.5	40.3	40.1	39.4	-0.6
	23–26	45.7	49.3	44.9	48.5	45.7	43.8	40.7	39.9	38.1	42.8	43.8	43.0	48.7	44.1	47.2	43.0	42.4	38.0	-4.4
	27–30	52.0	49.9	46.4	46.7	44.9	47.5	47.2	47.9	44.9	44.6	42.4	41.7	41.5	45.2	45.8	45.2	45.6	47.6	+2.0
Take LSD regularly [h]	18	76.5	76.1	75.9	74.1	73.9	72.3	70.2	69.9	69.3	67.3	63.6	67.8	65.3	65.5	66.8	66.8	62.7	60.7	-1.9
	19–22	78.6	82.2	81.6	79.2	81.1	78.6	78.4	77.8	78.9	77.5	73.9	74.8	72.8	74.4	78.0	76.6	74.7	72.7	-2.0
	23–26	82.1	85.4	84.1	86.0	85.3	84.3	83.5	80.8	82.0	80.3	80.2	82.0	83.1	81.4	78.9	79.0	76.0	71.7	-4.3
	27–30	90.5	87.8	85.3	86.9	85.3	87.5	83.9	87.9	82.2	85.7	82.9	80.2	87.0	83.0	83.2	83.8	80.3	79.9	-0.4
Try PCP once or twice [h]	18	46.8	44.8	45.0	46.2	48.3	45.2	47.1	46.6	47.0	48.0	47.4	49.7	52.4	53.9	51.6	53.9	53.8	54.4	+0.5
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try ecstasy (MDMA) once or twice [h,m]	18	34.5	35.0	37.9	45.7	52.2	56.3	57.7	60.1	59.3	58.1	57.0	53.3	50.6	49.0	49.4	47.5	47.8	49.5	+1.7
	19–22	42.7	37.6	37.9	40.5	46.8	50.1	52.3	53.8	51.0	50.3	51.4	51.4	50.7	49.9	45.9	52.4	50.7	47.7	—
	23–26	47.7	50.0	46.7	45.7	45.6	45.9	44.9	51.2	46.4	51.4	46.3	46.4	47.5	54.2	43.7	49.1	56.5	48.8	—
	27–30	50.4	50.9	48.9	53.6	52.0	58.8	49.1	50.2	46.5	51.9	43.5	43.5	52.0	51.3	44.3	51.4	52.0	54.5	—
Take ecstasy (MDMA) occasionally [h,m]	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	19–22	—	—	—	72.5	77.8	81.7	78.3	80.0	82.5	79.3	81.9	79.2	76.2	71.6	76.7	75.3	72.9	66.9	—
	23–26	—	—	—	72.5	71.9	73.6	77.4	77.2	77.0	78.7	78.6	76.2	79.1	76.9	76.6	69.8	77.6	69.1	—
	27–30	—	—	—	75.2	76.5	79.9	76.9	74.7	70.4	72.0	71.3	71.4	69.7	77.8	75.0	76.8	71.6	73.1	—
Try salvia once or twice [d,k]	18	—	—	—	—	—	—	—	—	—	—	—	—	39.8	38.7	13.8	12.9	14.1	13.1	-1.0
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	22.5	21.4	25.9	23.7	-2.3
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.6	19.6	24.5	23.5	-0.9
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.8	20.6	18.4	21.7	+3.3
Take salvia occasionally [k]	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	23.1	21.3	20.0	17.6	-2.4
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	29.2	30.6	32.6	32.6	0.0
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	26.6	25.5	31.1	31.2	+0.1
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	24.7	25.7	25.4	28.8	+3.5
Try cocaine once or twice [h]	18	54.6	52.1	51.1	50.7	51.2	51.0	50.7	50.5	52.5	51.3	50.3	53.1	52.8	54.0	51.6	54.4	53.7	51.1	-2.5
	19–22	55.4	52.8	56.7	48.9	55.5	55.0	55.5	55.6	54.0	55.8	56.7	54.9	56.8	56.2	57.0	56.3	56.3	57.4	+1.2
	23–26	60.2	62.6	63.1	62.4	61.0	55.4	52.1	53.0	52.5	56.9	55.0	56.6	56.7	54.9	60.3	50.9	57.3	49.1	-8.2 s
	27–30	60.5	61.7	59.9	60.9	58.8	56.4	61.4	56.5	58.1	54.8	56.1	52.0	51.6	54.7	51.8	53.8	50.1	53.1	+3.0
Take cocaine occasionally [h]	18	70.1	70.1	69.5	69.9	68.3	69.1	67.2	66.7	69.8	68.8	67.1	71.4	67.8	69.7	69.0	70.2	68.1	66.3	-1.9
	19–22	71.2	68.0	72.4	70.0	69.9	70.3	70.2	72.1	71.0	71.5	72.4	67.2	72.9	70.3	78.0	76.5	74.9	76.4	+1.5
	23–26	74.2	77.8	76.2	74.2	75.4	68.3	74.1	70.4	68.5	70.9	67.2	74.9	71.6	71.6	76.9	75.8	75.8	69.5	-6.3
	27–30	73.2	75.4	76.5	78.1	74.3	72.6	75.3	76.2	74.6	72.1	73.9	65.4	71.5	71.0	73.2	77.9	70.7	71.5	+0.9
Take cocaine regularly [h]	18	86.3	85.8	86.2	84.1	84.5	83.0	82.2	82.8	84.6	83.3	80.7	84.4	81.7	83.8	82.6	83.3	80.6	79.1	-1.6
	19–22	88.7	88.5	90.7	85.1	88.3	87.4	87.1	89.2	86.2	86.7	87.0	88.6	87.9	86.3	92.3	91.4	89.7	90.4	+0.7
	23–26	92.9	92.7	92.9	91.1	91.5	88.5	91.5	88.0	90.9	88.0	86.5	89.2	90.9	88.0	91.2	91.2	92.4	86.4	-6.1 s
	27–30	93.0	92.4	92.3	94.5	91.2	92.9	91.3	94.0	90.0	89.9	91.1	88.8	92.7	87.2	91.2	91.7	88.7	90.0	+1.3

(List of drugs continued.)

TABLE 6-1 (cont.)
Trends in Harmfulness as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

Percentage saying "great risk" [a]

Q. How much do you think people risk harming themselves (physically or in other ways), if they . . .	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Try crack once or twice [h]	18	—	—	—	—	—	—	—	57.0	62.1	62.9	64.3	60.6	62.4	57.6	58.4	54.6	56.0	54.0
	19–22	—	—	—	—	—	—	—	59.4	67.3	68.5	69.4	66.9	65.4	63.5	70.1	61.9	65.2	62.0
	23–26	—	—	—	—	—	—	—	59.1	63.5	69.8	67.3	66.9	67.1	64.2	69.3	64.8	68.6	64.7
	27–30	—	—	—	—	—	—	—	—	66.5	64.9	68.7	66.8	64.3	68.8	65.6	66.4	66.7	68.5
Take crack occasionally [h]	18	—	—	—	—	—	—	—	70.4	73.2	75.3	80.4	76.5	76.3	73.9	73.8	72.8	71.4	70.3
	19–22	—	—	—	—	—	—	—	75.0	77.3	81.8	82.3	82.7	81.9	83.6	84.3	78.8	83.5	79.1
	23–26	—	—	—	—	—	—	—	70.3	74.0	79.9	81.1	83.9	84.4	81.6	83.2	81.4	85.9	80.8
	27–30	—	—	—	—	—	—	—	—	76.4	76.7	82.6	81.8	79.1	83.6	78.6	81.1	81.3	85.3
Take crack regularly [h]	18	—	—	—	—	—	—	—	84.6	84.8	85.6	91.6	90.1	89.3	87.5	89.6	88.6	88.0	86.2
	19–22	—	—	—	—	—	—	—	89.6	91.1	94.1	94.9	95.6	93.4	96.2	96.0	94.2	94.7	93.3
	23–26	—	—	—	—	—	—	—	88.0	89.2	91.5	94.2	95.4	94.1	93.4	94.9	95.5	96.1	91.4
	27–30	—	—	—	—	—	—	—	—	89.6	89.5	95.3	94.4	93.3	93.5	93.0	94.0	94.3	96.0
Try cocaine powder once or twice [i]	18	—	—	—	—	—	—	—	45.3	51.7	53.8	53.9	53.6	57.1	53.2	55.4	52.0	53.2	51.4
	19–22	—	—	—	—	—	—	—	44.0	48.6	51.1	54.5	52.7	56.2	49.7	62.0	55.8	57.1	53.8
	23–26	—	—	—	—	—	—	—	41.0	43.6	48.4	48.9	47.4	45.9	45.6	52.5	48.9	57.2	53.6
	27–30	—	—	—	—	—	—	—	—	42.0	45.1	46.2	43.3	42.3	49.9	47.1	48.2	48.9	49.1
Take cocaine powder occasionally [i]	18	—	—	—	—	—	—	—	56.8	61.9	65.8	71.1	69.8	70.8	68.6	70.6	69.1	68.8	67.7
	19–22	—	—	—	—	—	—	—	58.0	59.0	63.2	70.0	69.9	72.6	70.6	75.4	73.0	77.4	70.7
	23–26	—	—	—	—	—	—	—	50.0	53.2	62.2	63.3	67.0	65.8	64.0	68.8	68.8	76.1	72.8
	27–30	—	—	—	—	—	—	—	—	53.6	52.7	60.9	59.2	61.2	64.3	61.0	65.9	68.2	69.7
Take cocaine powder regularly [i]	18	—	—	—	—	—	—	—	81.4	82.9	83.9	90.2	88.9	88.4	87.0	88.6	87.8	86.8	86.0
	19–22	—	—	—	—	—	—	—	86.6	87.6	91.3	92.5	93.8	92.1	94.0	94.9	93.5	93.8	92.8
	23–26	—	—	—	—	—	—	—	82.9	84.1	88.5	92.4	93.8	91.3	92.4	92.8	92.1	94.8	90.8
	27–30	—	—	—	—	—	—	—	—	85.1	86.7	92.7	91.1	91.5	92.5	90.7	92.7	91.7	93.0
Try heroin once or twice [g]	18	52.1	52.9	51.1	50.8	49.8	47.3	45.8	53.6	54.0	53.8	55.4	55.2	50.9	50.7	52.8	50.9	52.5	56.7
	19–22	57.8	56.8	54.4	52.5	58.7	51.0	55.5	57.9	58.9	59.6	58.3	59.9	59.8	58.9	60.8	58.9	61.0	63.9
	23–26	—	—	—	—	58.2	59.2	60.8	66.6	65.4	62.3	64.1	62.4	63.7	65.0	63.3	64.1	63.5	67.3
	27–30	—	—	—	—	—	—	—	—	66.0	69.7	67.5	66.1	66.5	69.3	69.6	66.4	66.4	67.9
Take heroin occasionally [g]	18	70.9	72.2	69.8	71.8	70.7	69.8	68.2	74.6	73.8	75.5	76.6	74.9	74.2	72.0	72.1	71.0	74.8	76.3
	19–22	77.5	77.8	73.6	74.5	74.9	73.6	77.2	77.6	77.5	79.8	80.8	80.2	81.6	78.8	79.0	77.9	82.1	84.7
	23–26	—	—	—	—	81.2	80.7	78.9	84.5	82.4	80.8	83.4	84.4	81.5	82.1	80.8	85.3	82.4	86.5
	27–30	—	—	—	—	—	—	—	—	86.0	86.8	85.3	84.3	84.9	86.2	86.8	83.1	83.8	85.8
Take heroin regularly [g]	18	86.2	87.5	86.0	86.1	87.2	86.0	87.1	88.7	88.8	89.5	90.2	89.6	89.2	88.3	88.0	87.2	89.5	88.9
	19–22	87.2	89.9	87.5	88.6	86.8	90.2	90.7	90.2	89.6	90.8	91.2	91.5	92.2	89.2	91.2	89.9	94.0	93.7
	23–26	—	—	—	—	92.0	90.1	90.6	92.8	91.5	91.3	91.0	92.6	91.3	91.6	93.0	93.5	92.7	94.4
	27–30	—	—	—	—	—	—	—	—	92.7	93.5	93.0	90.7	91.3	92.6	93.8	92.4	92.1	93.8
Try narcotics other than heroin once or twice [h]	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try narcotics other than heroin regularly [h]	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try amphetamines once or twice [b,h]	18	29.7	26.4	25.3	24.7	25.4	25.2	25.1	29.1	29.6	32.8	32.2	36.3	32.6	31.3	31.4	28.8	30.8	31.0
	19–22	24.6	24.6	27.8	24.8	26.9	23.9	27.1	27.4	31.7	28.9	35.6	32.8	34.5	33.3	36.3	32.9	36.8	30.1
	23–26	—	—	—	—	29.6	29.4	29.4	34.1	33.2	32.5	35.3	31.0	32.7	32.6	32.9	34.3	34.9	37.8
	27–30	—	—	—	—	—	—	—	—	35.2	37.5	36.9	36.5	36.2	34.0	37.5	36.0	36.2	34.5
Take amphetamines regularly [b,h]	18	69.1	66.1	64.7	64.8	67.1	67.2	67.3	69.4	69.8	71.2	71.2	74.1	72.4	69.9	67.0	65.9	66.8	66.0
	19–22	71.9	69.9	68.3	69.9	68.4	68.5	72.3	72.0	73.9	71.3	74.0	77.1	73.5	73.5	71.6	72.2	75.8	72.3
	23–26	—	—	—	—	75.8	77.2	75.6	78.2	77.4	76.7	77.8	79.4	76.4	76.2	73.6	80.5	78.5	79.1
	27–30	—	—	—	—	—	—	—	—	80.6	82.9	83.3	79.4	80.3	79.8	78.4	77.7	75.6	77.4
Try crystal methamphetamine (ice) [h]	18	—	—	—	—	—	—	—	—	—	—	—	61.6	61.9	57.5	58.3	54.4	55.3	54.4
	19-22	—	—	—	—	—	—	—	—	—	—	57.8	58.6	57.7	57.5	61.4	58.9	61.1	56.4
	23–26	—	—	—	—	—	—	—	—	—	—	56.5	56.0	55.6	52.0	61.0	57.8	64.1	60.7
	27–30	—	—	—	—	—	—	—	—	—	—	59.6	57.2	52.7	60.3	57.9	58.5	59.1	59.8

(Table continued on next page.)

TABLE 6-1 (cont.)
Trends in Harmfulness as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

Percentage saying "great risk" [a]

Q. How much do you think people risk harming themselves (physically or in other ways), if they . . .	Age Group	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Try crack once or twice [h]	18	52.2	48.2	48.4	49.4	50.8	47.3	47.8	48.4	47.8	47.3	47.5	48.4	50.2	51.7	52.0	55.6	54.5	53.6	-1.0
	19–22	59.3	56.1	52.9	54.1	54.1	55.1	56.8	56.6	55.3	51.9	54.9	54.9	53.7	56.6	—	—	—	—	—
	23–26	67.3	64.6	63.2	59.8	60.9	58.5	56.4	60.6	54.7	58.4	50.5	50.6	58.4	61.6	—	—	—	—	—
	27–30	66.5	65.0	62.9	69.3	67.4	66.0	62.6	61.9	56.8	64.1	56.2	56.2	62.2	60.4	—	—	—	—	—
Take crack occasionally [h]	18	68.7	67.3	65.8	65.4	65.6	64.0	64.5	63.8	64.8	63.6	65.2	64.7	64.3	66.2	66.5	69.5	68.5	67.8	-0.7
	19–22	79.1	75.5	74.9	72.3	75.3	75.3	76.0	75.0	72.8	77.7	75.7	75.7	73.6	74.8	—	—	—	—	—
	23–26	84.2	81.6	84.0	80.1	82.2	77.1	76.4	78.6	76.8	79.8	75.2	75.2	77.7	82.8	—	—	—	—	—
	27–30	81.7	79.8	81.6	84.4	81.5	81.9	82.1	79.5	82.8	79.1	77.3	77.3	80.1	79.6	—	—	—	—	—
Take crack regularly [h]	18	85.3	85.4	85.3	85.8	84.1	83.2	83.5	83.3	82.8	82.6	83.4	84.0	83.8	83.9	84.0	85.4	82.0	81.2	-0.8
	19–22	92.8	92.3	91.1	89.6	91.1	93.8	93.3	92.5	90.3	90.3	93.6	93.6	93.1	90.8	—	—	—	—	—
	23–26	95.6	94.4	95.6	93.4	94.7	92.2	92.5	93.1	93.3	93.1	91.8	91.8	93.7	94.1	—	—	—	—	—
	27–30	94.3	95.2	93.5	96.8	94.2	94.4	94.0	95.2	94.1	93.6	93.1	93.1	93.9	92.6	—	—	—	—	—
Try cocaine powder once or twice [i]	18	48.5	46.1	47.0	49.0	49.5	46.2	45.4	46.2	45.8	45.1	45.1	46.5	48.2	48.0	48.1	49.9	49.9	49.0	-0.9
	19–22	53.0	47.9	48.0	47.1	47.9	49.4	48.7	50.2	48.7	46.8	48.3	48.3	44.4	51.3	52.2	51.3	52.8	52.9	+0.1
	23–26	54.1	53.8	53.2	53.9	52.5	50.8	46.0	53.3	45.8	48.1	44.1	44.2	43.9	47.4	52.5	47.4	48.9	49.2	+0.3
	27–30	49.8	49.7	52.2	53.3	54.4	56.6	52.5	52.9	49.0	53.6	47.2	47.2	52.1	48.3	53.5	48.3	51.2	49.8	-1.4
Take cocaine powder occasionally [i]	18	65.4	64.2	64.7	63.2	64.4	61.4	61.6	60.8	61.9	59.9	61.6	62.6	62.6	64.2	62.6	65.4	64.8	62.8	-2.0
	19–22	73.0	69.3	69.3	64.4	68.9	69.3	68.6	68.1	66.4	67.1	68.5	68.5	63.7	64.5	69.4	64.5	69.7	70.3	+0.7
	23–26	77.0	70.8	76.0	70.5	73.7	67.9	64.6	69.9	66.7	69.9	64.5	64.5	65.5	68.2	73.0	68.2	65.9	66.6	+0.6
	27–30	68.5	70.1	71.3	73.5	71.9	71.7	71.5	71.7	73.1	69.3	64.9	65.0	68.9	68.8	71.0	68.8	67.3	64.8	-2.4
Take cocaine powder regularly [i]	18	84.1	84.6	85.5	84.4	84.2	82.3	81.7	82.7	82.1	81.5	82.5	83.4	81.8	83.3	83.3	83.9	81.5	80.1	-1.4
	19–22	91.5	92.4	90.7	89.8	91.0	92.0	91.6	90.7	89.1	89.5	92.3	92.3	90.7	91.0	88.3	90.2	88.6	89.6	+1.0
	23–26	93.7	93.6	94.2	92.2	93.4	89.1	89.4	91.2	92.9	92.3	90.5	90.5	91.0	93.8	90.6	88.7	86.1	88.1	+2.0
	27–30	92.3	93.1	91.5	94.0	93.3	94.1	93.1	93.9	92.4	92.5	90.1	90.2	92.1	91.5	92.2	90.9	89.2	91.4	+2.2
Try heroin once or twice [g]	18	57.8	56.0	54.2	55.6	56.0	58.0	56.6	55.2	59.1	58.4	55.5	59.3	58.3	59.1	59.4	61.7	62.8	64.0	+1.2
	19–22	60.7	63.5	63.2	64.0	63.1	64.6	67.3	66.5	65.0	69.6	67.7	67.3	64.2	66.5	66.8	68.9	66.1	70.4	+4.4
	23–26	67.3	68.0	70.7	71.9	69.8	70.6	67.5	69.2	67.0	68.3	70.1	69.2	75.6	71.3	74.8	69.2	70.8	72.0	+1.2
	27–30	69.7	70.1	67.4	68.2	70.9	72.3	68.4	74.4	70.8	70.2	70.2	67.6	69.6	69.1	70.4	72.7	71.7	74.5	+2.8
Take heroin occasionally [g]	18	76.9	77.3	74.6	75.9	76.6	78.5	75.7	76.0	79.1	76.2	75.3	79.7	74.8	77.2	78.0	78.2	77.9	78.0	+0.1
	19–22	80.4	82.5	82.0	83.6	82.2	84.9	85.1	83.8	84.3	85.4	84.5	83.3	81.3	82.9	82.1	85.0	83.3	85.8	+2.5
	23–26	83.9	88.5	86.6	88.4	90.0	88.3	86.7	87.5	85.2	86.5	88.0	87.8	90.0	88.6	84.2	85.1	85.9	86.0	+0.1
	27–30	86.6	87.1	86.5	86.4	87.9	87.4	88.6	91.2	88.3	88.5	87.7	87.7	90.1	85.8	86.2	88.6	83.7	88.2	+4.6 s
Take heroin regularly [g]	18	89.1	89.9	89.2	88.3	88.5	89.3	86.8	87.5	89.7	87.8	86.4	89.9	85.5	87.9	88.6	87.6	85.7	84.8	-0.9
	19–22	92.4	92.8	94.0	91.3	92.6	93.9	94.3	94.9	94.2	93.6	92.3	92.6	90.8	91.8	93.8	93.5	94.0	93.3	-0.8
	23–26	93.4	93.7	94.8	95.9	96.3	96.5	96.0	94.8	95.8	93.1	95.7	94.5	97.1	94.2	92.5	95.0	96.2	92.5	-3.7 s
	27–30	95.0	93.7	94.2	94.5	95.9	94.9	95.0	97.3	95.3	94.8	95.4	93.9	97.2	94.7	93.6	96.2	96.1	95.6	-0.5
Try narcotics other than heroin once or twice [h]	18	—	—	—	—	—	—	—	—	—	—	—	—	40.4	39.9	38.4	43.1	42.7	44.1	+1.4
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	47.3	46.1	49.8	50.6	+0.7
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	45.3	44.1	45.2	46.4	+1.2
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	43.0	47.3	48.5	45.6	-2.9
Try narcotics other than heroin regularly [h]	18	—	—	—	—	—	—	—	—	—	—	—	—	74.9	75.5	73.9	75.8	72.7	73.9	+1.2
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	70.3	74.9	76.0	76.2	+0.1
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	78.2	75.6	75.8	75.6	-0.2
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	76.2	75.7	76.0	74.9	-1.1
Try amphetamines once or twice [b,h]	18	35.3	32.2	32.6	34.7	34.4	36.8	35.7	37.7	39.5	41.3	39.2	41.9	40.6	34.8	34.3	36.3	34.1	34.0	-0.1
	19–22	31.7	33.7	35.0	34.2	38.1	40.2	36.8	38.3	40.0	38.4	42.1	39.3	40.8	34.7	31.9	33.8	32.8	34.5	+1.7
	23–26	40.9	41.8	39.9	41.6	38.0	38.3	33.2	39.1	37.0	38.0	40.8	40.7	42.2	31.4	37.8	31.4	37.4	33.5	-3.9
	27–30	37.6	36.3	39.4	38.5	39.0	40.5	39.2	38.2	39.7	37.4	36.5	36.2	38.5	36.9	35.3	34.0	30.4	32.1	+1.7
Take amphetamines regularly [b,h]	18	67.7	66.4	66.3	67.1	64.8	65.6	63.9	67.1	68.1	68.1	65.4	69.0	63.6	58.7	60.0	59.5	55.1	54.3	-0.8
	19–22	71.9	72.4	73.4	71.1	72.7	75.0	72.4	74.1	72.1	73.8	74.2	74.7	76.9	66.1	69.8	63.9	65.3	63.8	-1.5
	23–26	77.5	78.7	79.0	77.7	77.9	80.1	75.1	80.1	78.3	77.0	76.5	73.9	80.8	69.7	68.3	64.9	68.5	59.0	-9.6 s
	27–30	81.1	82.6	80.8	79.9	79.8	81.5	77.6	78.9	78.9	77.6	78.9	80.1	81.3	75.1	73.5	67.8	65.6	65.1	-0.4
Try crystal methamphetamine (ice) [h]	18	52.7	51.2	51.3	52.7	53.8	51.2	52.4	54.6	59.1	60.2	62.2	63.4	64.9	66.5	67.8	72.2	70.2	70.0	-0.2
	19-22	55.8	50.6	49.2	52.5	56.5	60.0	60.3	63.1	63.5	65.0	70.0	70.0	70.7	74.2	—	—	—	—	—
	23–26	58.2	61.3	60.1	59.2	57.7	58.6	55.9	63.9	63.9	66.6	65.6	65.6	70.1	74.6	—	—	—	—	—
	27–30	59.9	61.0	59.7	66.4	62.5	66.6	62.8	62.6	64.9	67.9	62.0	62.0	70.2	72.9	—	—	—	—	—

(List of drugs continued.)

TABLE 6-1 (cont.)
Trends in Harmfulness as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

Percentage saying "great risk" [a]

Q. How much do you think people risk harming themselves (physically or in other ways), if they . . .	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Try bath salts (synthetic stimulants) once or twice [h]	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try bath salts (synthetic stimulants) occasionally [h]	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try Adderall once or twice [h]	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take Adderall occasionally [h]	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try sedatives/ barbiturates once or twice [c,h]	18	30.9	28.4	27.5	27.0	27.4	26.1	25.4	30.9	29.7	32.2	32.4	35.1	32.2	29.2	29.9	26.3	29.1	26.9
	19–22	27.6	26.4	30.5	25.4	29.9	25.0	30.7	29.6	32.7	30.5	36.4	33.5	33.5	33.4	35.0	30.5	34.1	31.4
	23–26	—	—	—	—	32.2	29.9	30.2	35.5	35.8	32.9	37.9	31.8	33.5	32.8	34.0	34.8	35.8	37.3
	27–30	—	—	—	—	—	—	—	—	37.2	38.7	39.0	37.0	38.2	36.5	40.5	36.6	37.2	35.7
Take sedatives/ barbiturates regularly [c,h]	18	72.2	69.9	67.6	67.7	68.5	68.3	67.2	69.4	69.6	70.5	70.2	70.5	70.2	66.1	63.3	61.6	60.4	56.8
	19–22	74.0	73.3	72.7	71.3	71.6	71.7	74.5	73.0	74.0	71.7	75.5	75.5	73.6	71.1	69.4	66.4	70.7	69.5
	23–26	—	—	—	—	77.4	77.0	74.9	79.9	79.8	76.6	80.5	77.7	76.3	75.0	74.3	77.6	77.1	75.2
	27–30	—	—	—	—	—	—	—	—	81.5	83.7	84.0	79.6	78.6	80.2	78.3	77.7	74.1	77.1
Try one or two drinks of an alcoholic beverage (beer, wine, liquor) [i]	18	3.8	4.6	3.5	4.2	4.6	5.0	4.6	6.2	6.0	6.0	8.3	9.1	8.6	8.2	7.6	5.9	7.3	6.7
	19–22	3.0	3.4	3.1	2.3	4.7	3.1	5.4	3.5	3.9	5.9	6.1	5.4	5.8	6.6	6.5	4.5	3.3	3.2
	23–26	—	—	—	—	5.5	3.0	6.5	6.6	4.2	5.1	5.7	4.4	5.6	3.2	4.5	4.3	4.8	4.4
	27–30	—	—	—	—	—	—	—	—	5.0	6.3	4.4	6.6	5.6	4.7	4.1	6.7	4.7	4.0
Take one or two drinks nearly every day [i]	18	20.3	21.6	21.6	21.6	23.0	24.4	25.1	26.2	27.3	28.5	31.3	32.7	30.6	28.2	27.0	24.8	25.1	24.8
	19–22	22.7	22.9	23.2	23.2	25.0	26.3	27.3	26.1	26.5	28.1	30.1	29.1	30.2	28.0	27.5	24.0	23.0	24.2
	23–26	—	—	—	—	27.8	27.4	26.9	30.2	29.1	27.8	31.1	30.4	31.6	25.9	26.2	26.1	22.0	20.2
	27–30	—	—	—	—	—	—	—	—	27.4	31.7	32.2	31.7	30.9	28.0	27.4	27.2	24.0	24.8
Take four or five drinks nearly every day [i]	18	65.7	64.5	65.5	66.8	68.4	69.8	66.5	69.7	68.5	69.8	70.9	69.5	70.5	67.8	66.2	62.8	65.6	63.0
	19–22	71.2	72.7	73.3	72.7	76.2	74.1	74.0	76.4	72.8	75.7	76.1	75.5	71.8	72.1	70.3	72.5	68.5	71.4
	23–26	—	—	—	—	76.7	77.9	80.1	77.2	81.8	76.9	79.7	80.2	78.0	76.7	77.5	75.2	72.0	75.1
	27–30	—	—	—	—	—	—	—	—	79.3	81.7	84.7	79.1	79.9	79.1	76.6	82.2	76.1	79.3
Have five or more drinks once or twice each weekend [i]	18	35.9	36.3	36.0	38.6	41.7	43.0	39.1	41.9	42.6	44.0	47.1	48.6	49.0	48.3	46.5	45.2	49.5	43.0
	19–22	34.2	30.1	33.5	36.6	37.9	40.2	34.6	36.7	36.9	42.4	40.6	40.8	41.8	42.4	41.9	39.9	40.7	36.6
	23–26	—	—	—	—	38.4	39.7	39.1	39.8	35.8	37.7	40.2	39.3	37.6	36.2	40.2	37.9	39.1	37.4
	27–30	—	—	—	—	—	—	—	—	41.0	42.3	44.1	42.2	45.1	42.9	43.2	44.6	41.5	40.0
Smoke one or more packs of cigarettes per day [f]	18	63.7	63.3	60.5	61.2	63.8	66.5	66.0	68.6	68.0	67.2	68.2	69.4	69.2	69.5	67.6	65.6	68.2	68.7
	19–22	66.5	61.7	64.0	62.1	69.1	71.4	70.4	70.6	71.0	73.4	72.5	77.9	72.6	76.0	71.2	71.6	73.8	76.3
	23–26	—	—	—	—	71.1	70.1	75.7	73.6	75.5	71.4	78.5	75.3	76.3	78.4	76.4	76.0	76.0	77.6
	27–30	—	—	—	—	—	—	—	—	72.8	75.2	77.8	75.4	77.6	75.0	75.3	75.6	73.0	80.3
Use electronic cigarettes (e-cigarettes) regularly	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Use smokeless tobacco regularly [h]	18	—	—	—	—	—	—	25.8	30.0	33.2	32.9	34.2	37.4	35.5	38.9	36.6	33.2	37.4	38.6
	19–22	—	—	—	—	—	—	29.7	34.1	31.1	37.1	33.5	38.9	40.1	43.3	37.6	42.3	40.9	46.5
	23–26	—	—	—	—	—	—	37.0	38.5	35.8	37.9	40.1	38.9	41.6	44.6	42.9	46.6	47.2	46.2
	27–30	—	—	—	—	—	—	—	—	42.8	42.8	43.8	44.3	44.1	47.3	46.3	44.2	43.6	50.2
Approximate Weighted N Per Form =	18	*3,234*	*3,604*	*3,557*	*3,305*	*3,262*	*3,250*	*3,020*	*3,315*	*3,276*	*2,796*	*2,553*	*2,549*	*2,684*	*2,759*	*2,591*	*2,603*	*2,449*	*2,579*
	19–22	*590*	*585*	*583*	*585*	*579*	*547*	*581*	*570*	*551*	*565*	*552*	*533*	*527*	*480*	*490*	*500*	*469*	*464*
	23–26					*540*	*512*	*545*	*531*	*527*	*498*	*511*	*505*	*518*	*503*	*465*	*446*	*438*	*420*
	27–30									*513*	*587*	*490*	*486*	*482*	*473*	*443*	*450*	*422*	*434*

(Years Cont.) →

(Table continued on next page.)

TABLE 6-1 (cont.)
Trends in Harmfulness as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

Percentage saying "great risk" [a]

Q. How much do you think people risk harming themselves (physically or in other ways), if they . . .	Age Group	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Try bath salts (synthetic stimulants) once or twice [h]	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	33.2	59.5	59.2	57.5	-1.6
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	44.5	62.7	68.8	65.2	-3.6
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	46.7	66.3	67.3	69.4	+2.0
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	48.7	64.5	73.7	72.4	-1.4
Take bath salts (synthetic stimulants) occasionally [h]	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	45.0	69.9	68.8	67.4	-1.4
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	52.6	70.1	76.1	75.3	-0.8
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	54.0	75.3	76.7	77.7	+1.0
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	55.9	71.5	78.4	77.4	-1.0
Try Adderall once or twice [h]	18	—	—	—	—	—	—	—	—	—	—	—	—	33.3	31.2	27.2	31.8	33.6	34.3	+0.7
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30.0	27.7	31.5	27.5	-4.0
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	28.9	32.9	32.2	29.8	-2.4
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	29.4	32.7	35.9	33.2	-2.8
Take Adderall occasionally [h]	18	—	—	—	—	—	—	—	—	—	—	—	—	41.6	40.8	35.3	38.8	41.5	41.6	+0.2
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	38.8	39.8	41.8	40.2	-1.7
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	39.7	44.8	44.9	41.3	-3.6
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	44.1	45.0	45.3	44.2	-1.1
Try sedatives/ barbiturates once or twice [c,h]	18	29.0	26.1	25.0	25.7	26.2	27.9	24.9	24.7	28.0	27.9	25.9	29.6	28.0	27.8	27.8	29.4	29.6	28.9	-0.7
	19–22	27.7	28.5	30.3	30.0	30.7	32.7	26.7	26.9	28.9	28.1	31.9	26.2	28.7	30.1	32.8	30.5	32.7	32.1	-0.6
	23–26	40.3	39.4	37.0	38.5	34.7	36.5	22.2	29.8	26.3	25.9	28.4	31.1	36.2	28.8	35.9	31.8	34.8	33.9	-0.9
	27–30	36.7	35.2	36.3	40.9	37.3	38.6	31.4	31.7	28.8	28.0	27.8	27.5	27.4	34.4	28.7	31.9	25.0	34.2	+9.2 s
Take sedatives/ barbiturates regularly [c,h]	18	56.3	54.1	52.3	50.3	49.3	49.6	54.0	54.1	56.8	55.1	50.2	54.7	52.1	52.4	53.9	53.3	50.5	50.6	+0.1
	19–22	65.1	64.7	64.6	61.8	64.5	63.8	60.2	64.4	61.3	63.2	64.0	59.4	64.6	63.6	68.2	64.7	66.9	63.0	-3.9
	23–26	73.9	75.1	73.8	73.1	73.1	72.8	63.9	67.0	67.6	64.8	66.8	64.4	69.6	64.9	71.4	67.6	72.3	64.5	-7.7 s
	27–30	79.9	80.7	75.5	78.2	75.4	79.0	70.1	75.2	68.0	70.0	70.4	69.0	71.1	71.4	70.7	72.6	64.2	67.0	+2.8
Try one or two drinks of an alcoholic beverage (beer, wine, liquor) [i]	18	8.0	8.3	6.4	8.7	7.6	8.4	8.6	8.5	9.3	10.5	10.0	9.4	10.8	9.4	8.7	9.9	8.6	10.3	+1.7
	19–22	4.2	5.7	5.4	4.8	6.6	7.5	5.1	3.8	7.7	5.1	7.9	4.1	6.8	7.2	6.4	5.8	5.7	4.9	-0.8
	23–26	4.4	6.6	3.5	5.5	5.1	5.7	4.7	5.3	5.1	4.8	6.5	5.7	5.5	4.0	3.5	4.3	5.4	5.1	-0.3
	27–30	6.2	5.9	4.7	5.5	3.1	6.9	4.6	7.3	4.2	6.2	3.4	4.1	4.7	6.6	4.8	4.0	3.8	3.5	-0.3
Take one or two drinks nearly every day [i]	18	24.3	21.8	21.7	23.4	21.0	20.1	23.0	23.7	25.3	25.1	24.2	23.7	25.4	24.6	23.7	23.1	21.1	21.5	+0.4
	19–22	22.1	23.9	22.1	19.6	22.7	19.8	21.3	22.1	22.0	19.0	24.4	20.6	20.8	20.1	23.1	20.0	22.4	19.9	-2.5
	23–26	21.0	26.0	21.7	23.5	23.4	19.1	22.9	19.9	22.5	21.2	21.0	21.1	20.8	14.4	18.4	18.8	17.5	17.2	-0.3
	27–30	20.8	25.3	22.0	22.7	21.7	21.4	21.8	23.7	20.2	21.5	21.5	20.6	18.2	16.9	19.8	17.4	16.5	15.9	-0.6
Take four or five drinks nearly every day [i]	18	62.1	61.1	59.9	60.7	58.8	57.8	59.2	61.8	63.4	61.8	60.8	62.4	61.1	62.3	63.6	62.4	61.2	59.1	-2.0
	19–22	70.4	69.9	69.9	64.5	71.1	66.4	65.3	63.0	66.6	68.8	68.5	67.1	65.6	67.4	69.6	68.7	67.9	70.2	+2.4
	23–26	69.3	72.8	71.7	75.8	74.9	71.1	74.2	71.2	72.4	70.2	70.0	67.8	68.3	69.9	73.1	69.7	69.2	71.2	+2.0
	27–30	75.7	75.1	77.4	72.8	76.2	70.6	72.1	77.5	73.0	76.5	77.1	71.6	71.6	73.8	71.2	68.3	72.6	69.4	-3.2
Have five or more drinks once or twice each weekend [i]	18	42.8	43.1	42.7	43.6	42.2	43.5	43.6	45.0	47.6	45.8	46.3	48.0	46.3	47.6	48.8	45.8	45.4	46.9	+1.5
	19–22	42.0	37.2	38.9	37.2	37.8	40.4	38.1	37.5	37.2	43.4	41.7	35.2	40.7	40.1	41.6	40.6	43.8	41.8	-2.0
	23–26	41.1	40.2	34.9	39.0	36.8	36.3	37.9	36.8	38.4	39.7	37.0	36.2	35.8	33.6	39.5	40.2	38.7	40.8	+2.1
	27–30	40.2	41.9	37.9	41.6	40.6	42.5	40.5	44.0	39.1	40.4	40.4	40.1	38.6	42.0	41.6	37.2	41.2	40.6	-0.6
Smoke one or more packs of cigarettes per day [f]	18	70.8	70.8	73.1	73.3	74.2	72.1	74.0	76.5	77.6	77.3	74.0	74.9	75.0	77.7	78.2	78.2	78.0	75.9	-2.1
	19–22	77.2	75.7	77.1	76.6	80.6	77.8	81.1	80.5	80.8	79.3	79.5	80.3	79.7	81.5	82.3	82.8	82.8	83.5	+0.7
	23–26	76.5	80.9	79.7	83.9	85.1	83.6	84.1	81.6	86.4	80.7	83.6	82.0	83.2	84.8	83.1	82.9	82.8	85.1	+2.3
	27–30	80.9	80.7	78.4	82.7	80.6	82.0	81.7	84.1	83.8	84.3	86.6	83.6	89.3	86.6	84.6	84.1	83.9	85.9	+2.1
Use electronic cigarettes (e-cigarettes) regularly [l]	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.2	16.2	+2.0
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16.8	21.6	+4.8 s
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	21.7	23.0	+1.2
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19.0	27.6	+8.6 sss
Use smokeless tobacco regularly [h]	18	40.9	41.1	42.2	45.4	42.6	43.3	45.0	43.6	45.9	44.0	42.9	40.8	41.2	42.6	44.3	41.6	40.7	38.5	-2.1
	19–22	47.4	47.0	52.0	48.4	53.6	50.8	49.9	47.6	46.4	48.9	48.7	44.6	45.8	46.0	56.7	52.8	47.8	47.8	0.0
	23–26	48.4	53.1	49.8	59.8	61.4	58.9	57.8	55.8	59.1	55.3	51.0	52.2	54.2	53.7	59.4	53.5	53.4	47.3	-6.0
	27–30	52.6	53.6	49.9	53.2	56.7	58.2	55.7	58.9	57.5	61.4	61.7	53.6	59.2	62.5	59.6	58.5	51.6	57.1	+5.5
Approximate Weighted N Per Form =	18	*2,564*	*2,306*	*2,130*	*2,173*	*2,198*	*2,466*	*2,491*	*2,512*	*2,407*	*2,450*	*2,389*	*2,290*	*2,440*	*2,408*	*2,331*	*2,098*	*2,067*	*2,174*	
	19–22	*431*	*447*	*424*	*430*	*395*	*402*	*447*	*412*	*411*	*375*	*377*	*393*	*363*	*374*	*345*	*337*	*314*	*315*	
	23–26	*413*	*418*	*400*	*392*	*382*	*401*	*426*	*408*	*361*	*351*	*375*	*345*	*363*	*366*	*323*	*337*	*319*	*296*	
	27–30	*416*	*400*	*377*	*384*	*369*	*380*	*388*	*374*	*358*	*344*	*350*	*337*	*343*	*319*	*335*	*320*	*282*	*312*	

Source. The Monitoring the Future study, the University of Michigan.

TABLE 6-2
Trends in Proportions Disapproving of Drug Use among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

Percentage disapproving [e]

Q. Do you disapprove of people (who are 18 or older) doing each of the following?	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Trying marijuana once or twice [i]	18	39.0	40.0	45.5	46.3	49.3	51.4	54.6	56.6	60.8	64.6	67.8	68.7	69.9	63.3	57.6	56.7	52.5	51.0
	19–22	38.2	36.1	37.0	42.0	44.1	46.6	51.6	52.8	55.8	62.4	59.6	60.4	57.8	60.6	63.5	57.1	55.4	56.2
	23–26	—	—	—	—	41.2	38.6	42.6	49.1	48.7	52.5	57.5	58.8	55.0	54.6	52.3	51.9	56.3	54.5
	27–30	—	—	—	—	—	—	—	—	49.0	50.9	53.8	54.6	51.9	56.8	55.7	57.5	54.1	59.0
Smoking marijuana occasionally [i]	18	49.7	52.6	59.1	60.7	63.5	65.8	69.0	71.6	74.0	77.2	80.5	79.4	79.7	75.5	68.9	66.7	62.9	63.2
	19–22	49.6	49.1	51.3	56.0	60.4	62.6	66.7	67.2	69.5	77.3	76.3	77.0	74.8	75.8	76.9	70.4	68.9	70.2
	23–26	—	—	—	—	54.8	52.8	57.0	64.9	63.4	69.4	73.7	73.3	74.0	71.9	70.9	68.1	72.5	69.2
	27–30	—	—	—	—	—	—	—	—	65.3	67.1	68.9	73.0	67.2	72.2	69.4	72.5	70.5	74.5
Smoking marijuana regularly [j]	18	74.6	77.4	80.6	82.5	84.7	85.5	86.6	89.2	89.3	89.8	91.0	89.3	90.1	87.6	82.3	81.9	80.0	78.8
	19–22	74.3	77.2	80.0	81.8	84.9	86.7	89.2	88.7	89.1	91.2	93.1	91.3	89.5	90.2	90.1	86.8	87.7	88.1
	23–26	—	—	—	—	80.6	81.3	83.3	87.4	86.9	90.4	91.0	89.6	90.2	92.1	90.3	90.1	88.9	88.1
	27–30	—	—	—	—	—	—	—	—	87.6	87.5	89.7	89.6	87.2	89.4	88.7	91.9	89.9	92.1
Trying LSD once or twice [h]	18	87.3	86.4	88.8	89.1	88.9	89.5	89.2	91.6	89.8	89.7	89.8	90.1	88.1	85.9	82.5	81.1	79.6	80.5
	19–22	87.4	84.8	85.9	88.4	88.1	89.1	90.4	90.0	90.9	89.3	90.5	88.4	84.6	88.5	86.8	84.2	83.0	83.1
	23–26	—	—	—	—	87.3	87.1	88.0	89.9	91.4	91.0	90.7	89.1	88.8	86.9	87.3	87.1	86.7	87.9
	27–30	—	—	—	—	—	—	—	—	91.0	87.2	89.7	87.9	85.6	88.8	88.2	87.4	88.7	88.7
Taking LSD regularly [h]	18	96.7	96.8	96.7	97.0	96.8	97.0	96.6	97.8	96.4	96.4	96.3	96.4	95.5	95.8	94.3	92.5	93.2	92.9
	19–22	98.2	97.4	97.7	97.6	97.6	98.8	98.5	98.0	98.1	97.5	99.1	97.5	97.0	97.8	97.7	96.8	97.0	97.4
	23–26	—	—	—	—	99.2	98.0	98.5	99.0	98.0	98.4	98.3	98.4	98.3	98.1	97.7	96.7	97.7	96.1
	27–30	—	—	—	—	—	—	—	—	98.8	97.1	98.9	98.9	97.5	98.5	98.7	98.6	98.1	97.5
Trying ecstasy (MDMA) once or twice [h]	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	82.2
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Taking ecstasy (MDMA) occasionally [h]	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Trying cocaine once or twice [h]	18	76.3	74.6	76.6	77.0	79.7	79.3	80.2	87.3	89.1	90.5	91.5	93.6	93.0	92.7	91.6	90.3	90.0	88.0
	19–22	73.0	69.3	69.9	74.1	72.5	77.6	78.9	82.3	85.3	88.8	90.1	91.2	90.6	92.7	93.9	94.2	92.0	91.7
	23–26	—	—	—	—	70.2	70.5	72.1	80.0	82.9	85.5	88.3	88.0	87.3	89.2	89.2	91.8	90.7	91.5
	27–30	—	—	—	—	—	—	—	—	82.1	81.0	85.5	86.9	83.9	85.7	86.6	86.6	88.3	89.2
Taking cocaine regularly [h]	18	91.1	90.7	91.5	93.2	94.5	93.8	94.3	96.7	96.2	96.4	96.7	97.3	96.9	97.5	96.6	96.1	95.6	96.0
	19–22	91.6	89.3	91.9	94.6	95.0	96.3	97.0	97.2	97.9	97.4	98.9	97.9	98.4	97.8	98.8	98.2	97.9	98.0
	23–26	—	—	—	—	95.7	95.3	97.3	98.1	97.6	98.3	98.4	98.5	98.7	98.4	98.8	97.7	97.8	96.9
	27–30	—	—	—	—	—	—	—	—	98.1	97.0	99.3	99.0	97.2	98.7	99.0	98.9	98.5	97.9
Trying heroin once or twice [h]	18	93.5	93.5	94.6	94.3	94.0	94.0	93.3	96.2	95.0	95.4	95.1	96.0	94.9	94.4	93.2	92.8	92.1	92.3
	19–22	96.3	95.4	95.6	95.2	95.1	96.2	96.8	96.3	97.1	96.4	98.3	95.9	95.9	96.3	96.6	95.6	95.2	95.6
	23–26	—	—	—	—	96.7	94.9	96.4	97.1	97.4	96.7	96.8	96.9	96.3	95.4	96.5	95.9	96.1	95.2
	27–30	—	—	—	—	—	—	—	—	97.9	95.8	97.5	96.6	94.8	97.3	94.7	96.3	96.0	96.9
Taking heroin occasionally [h]	18	96.7	97.2	96.9	96.9	97.1	96.8	96.6	97.9	96.9	97.2	96.7	97.3	96.8	97.0	96.2	95.7	95.0	95.4
	19–22	98.6	97.8	98.3	98.3	98.6	98.7	98.3	98.3	98.3	97.9	99.2	98.2	98.1	98.1	98.3	97.7	97.9	97.8
	23–26	—	—	—	—	99.2	98.2	98.8	99.1	98.4	98.3	98.1	99.0	98.7	98.4	98.6	97.7	98.7	97.4
	27–30	—	—	—	—	—	—	—	—	99.2	97.3	99.0	98.9	97.0	98.9	98.7	98.9	98.0	98.7
Taking heroin regularly [h]	18	97.6	97.8	97.5	97.7	98.0	97.6	97.6	98.1	97.2	97.4	97.5	97.8	97.2	97.5	97.1	96.4	96.3	96.4
	19–22	99.2	98.5	98.6	98.7	98.7	99.1	98.9	98.6	98.4	98.3	99.5	98.5	98.3	98.4	98.8	98.4	98.3	98.1
	23–26	—	—	—	—	99.4	98.8	99.1	99.4	98.7	98.7	98.5	99.3	99.2	98.9	98.8	98.7	98.9	97.6
	27–30	—	—	—	—	—	—	—	—	99.4	97.6	99.4	99.0	97.8	99.0	99.4	99.1	98.6	98.4

(Years Cont.)

(Table continued on next page.)

TABLE 6-2 (cont.)
Trends in Proportions Disapproving of Drug Use
among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

Q. Do you disapprove of people (who are 18 or older) doing each of the following?	Age Group	Percentage disapproving [e]																		
		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Trying marijuana once or twice [i]	18	51.6	48.8	52.5	49.1	51.6	53.4	52.7	55.0	55.6	58.6	55.5	54.8	51.6	51.3	48.8	49.1	48.0	45.5	-2.5
	19–22	55.9	54.0	55.2	49.3	48.7	54.2	48.3	50.3	51.2	47.6	52.7	46.7	50.5	49.0	46.0	44.2	39.7	37.4	-2.3
	23–26	55.3	55.7	54.8	51.2	52.4	47.8	53.4	47.7	47.5	54.6	46.2	44.9	42.5	38.8	40.9	38.1	37.8	34.6	-3.2
	27–30	55.7	52.6	58.0	54.4	56.9	54.9	55.4	52.1	52.0	50.9	49.3	49.3	48.5	46.5	42.7	38.7	35.1	33.0	-2.1
Smoking marijuana occasionally [j]	18	64.4	62.5	65.8	63.2	63.4	64.2	65.4	67.8	69.3	70.2	67.3	65.6	62.0	60.9	59.1	58.9	56.7	52.9	-3.8
	19–22	67.8	66.4	70.7	64.6	62.3	68.0	64.3	67.9	62.6	64.1	63.3	59.8	61.3	61.7	58.2	54.9	50.7	50.0	-0.7
	23–26	70.4	71.1	68.6	67.4	64.0	63.8	69.3	65.6	62.2	68.0	64.5	62.4	59.1	53.1	55.8	51.3	51.3	49.1	-2.2
	27–30	72.4	71.5	72.2	70.9	69.1	71.2	69.1	68.2	68.7	67.5	63.7	63.7	62.7	63.7	58.3	55.0	50.0	47.3	-2.7
Smoking marijuana regularly [j]	18	81.2	78.6	79.7	79.3	78.3	78.7	80.7	82.0	82.2	83.3	79.6	80.3	77.7	77.5	77.8	74.5	73.4	70.7	-2.7
	19–22	85.3	84.5	86.6	84.5	82.8	84.8	82.7	84.4	82.5	83.7	83.6	80.8	80.7	78.1	77.0	75.7	71.3	71.0	-0.3
	23–26	87.5	86.1	83.9	86.4	81.7	82.3	87.4	84.3	81.9	85.3	84.3	80.2	78.3	76.4	76.7	73.6	71.4	70.4	-1.0
	27–30	89.2	90.0	89.5	89.3	88.8	87.7	88.6	86.3	86.4	86.8	86.0	84.4	81.7	83.2	77.8	75.9	75.0	71.8	-3.2
Trying LSD once or twice [h]	18	82.1	83.0	82.4	81.8	84.6	85.5	87.9	87.9	88.0	87.8	85.5	88.2	86.5	86.3	87.2	86.6	85.0	81.7	-3.3 s
	19–22	80.8	83.2	82.3	81.4	83.7	86.2	85.0	87.6	85.4	88.5	86.5	83.0	86.7	83.3	84.0	83.5	77.8	75.5	-2.3
	23–26	84.1	84.8	80.3	83.0	79.2	80.1	84.0	84.0	84.5	87.6	81.8	85.0	82.6	80.1	83.3	79.7	79.8	76.8	-3.0
	27–30	87.3	86.6	87.2	85.7	82.7	85.6	82.5	82.2	82.0	84.1	82.7	84.5	85.1	85.1	82.4	81.4	82.2	77.9	-4.3
Taking LSD regularly [h]	18	93.5	94.3	94.2	94.0	94.0	94.4	94.6	95.6	95.9	94.9	93.5	95.3	94.3	94.9	95.2	95.3	94.7	92.5	-2.2 s
	19–22	96.3	97.0	96.8	96.5	96.9	98.4	97.3	98.9	97.8	97.7	96.8	96.8	96.6	96.5	96.0	96.7	97.0	95.2	-1.8
	23–26	97.6	98.0	97.0	97.1	97.9	96.9	97.1	98.7	97.0	98.4	97.4	98.2	96.5	95.9	97.4	96.1	95.8	96.6	+0.8
	27–30	97.4	97.9	98.6	98.2	98.0	98.2	98.2	97.2	96.7	97.2	97.1	98.6	98.6	97.1	97.3	97.2	97.3	96.0	-1.3
Trying ecstasy (MDMA) once or twice [h,m]	18	82.5	82.1	81.0	79.5	83.6	84.7	87.7	88.4	89.0	87.8	88.2	88.2	86.3	83.9	87.1	84.9	83.1	84.5	—
	19–22	—	—	—	81.5	80.3	87.2	83.5	90.3	87.5	88.5	89.5	89.1	91.4	85.9	87.9	83.9	83.7	79.7	—
	23–26	—	—	—	80.6	80.6	80.2	83.1	83.9	83.9	87.4	83.9	85.0	86.9	85.1	85.2	79.9	83.6	79.1	—
	27–30	—	—	—	84.2	84.0	86.3	83.2	82.4	82.2	81.8	82.7	83.0	81.9	86.6	83.7	84.5	81.9	84.6	—
Taking ecstasy (MDMA) occasionally [h,m]	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	19–22	—	—	—	92.8	91.8	95.6	93.8	96.7	94.0	95.3	94.8	95.2	95.3	91.8	94.4	92.3	94.6	90.7	-3.9
	23–26	—	—	—	90.5	91.8	92.1	93.3	94.4	93.7	94.3	94.0	95.4	94.3	92.5	93.3	92.1	93.5	90.7	-2.8
	27–30	—	—	—	91.7	93.0	94.3	91.0	92.1	93.4	92.8	94.1	93.6	92.6	94.5	93.5	93.0	93.9	93.2	-0.7
Trying cocaine once or twice [h]	18	89.5	89.1	88.2	88.1	89.0	89.3	88.6	88.9	89.1	89.6	89.2	90.8	90.5	91.1	91.0	92.3	90.0	89.0	-0.9
	19–22	89.9	90.9	89.9	87.7	87.9	89.3	87.7	92.3	88.2	89.2	85.8	87.8	87.1	90.1	89.7	90.5	86.7	86.0	-0.7
	23–26	89.0	91.3	87.1	90.1	85.8	86.4	87.4	88.3	84.4	87.6	84.5	86.2	86.0	82.7	86.0	85.7	84.8	82.9	-1.9
	27–30	90.3	90.4	89.4	90.3	88.5	91.5	88.0	87.0	85.8	87.7	87.4	88.3	87.3	87.0	85.6	82.5	85.0	79.1	-5.9
Taking cocaine regularly [h]	18	95.6	94.9	95.5	94.9	95.0	95.8	95.4	96.0	96.1	96.2	94.8	96.5	96.0	96.0	96.8	96.7	96.3	95.2	-1.1
	19–22	97.8	97.6	98.0	97.2	97.0	98.2	98.5	98.7	98.9	99.0	97.6	97.6	97.6	97.2	97.6	97.4	97.8	97.8	+0.1
	23–26	98.5	98.3	97.8	97.5	97.5	97.6	98.1	98.9	97.3	98.1	98.0	98.7	97.6	97.3	98.8	97.8	97.7	97.5	-0.2
	27–30	97.8	98.8	98.7	98.4	97.8	98.8	98.8	97.8	97.2	97.9	97.3	99.0	99.0	98.4	98.5	98.0	97.6	98.0	+0.4
Trying heroin once or twice [h]	18	93.7	93.5	93.0	93.1	94.1	94.1	94.2	94.3	93.8	94.8	93.3	94.7	93.9	94.3	95.8	95.6	94.7	94.2	-0.6
	19–22	95.1	95.5	94.1	94.2	95.0	96.4	95.9	98.8	95.6	97.6	95.7	95.5	95.8	96.7	95.9	96.3	96.5	96.1	-0.4
	23–26	94.6	96.3	93.1	95.0	94.8	95.0	95.0	96.1	93.7	97.2	95.6	94.9	94.5	95.5	95.7	94.7	97.2	96.5	-0.7
	27–30	95.9	96.7	95.9	96.4	94.4	97.6	94.9	95.6	93.9	96.4	96.2	95.4	96.3	95.7	95.9	94.8	95.3	95.2	-0.2
Taking heroin occasionally [h]	18	96.1	95.7	96.0	95.4	95.6	95.9	96.4	96.3	96.2	96.8	95.3	96.9	96.2	96.3	97.0	96.9	96.6	95.3	-1.3 s
	19–22	98.2	97.2	98.0	97.9	97.9	98.3	98.9	99.4	98.2	98.8	97.3	97.9	97.5	97.7	97.4	98.0	97.8	97.5	-0.3
	23–26	97.5	98.5	98.2	97.8	97.5	97.2	98.5	98.3	97.7	98.8	98.3	98.5	97.1	99.0	99.0	98.1	98.1	98.1	0.0
	27–30	97.6	98.8	98.6	98.4	98.6	98.7	98.1	97.7	97.1	98.1	98.2	98.6	99.3	98.1	97.9	97.7	97.3	98.0	+0.7
Taking heroin regularly [h]	18	96.6	96.4	96.6	96.2	96.2	97.1	97.1	96.7	96.9	97.1	95.9	97.4	96.4	96.7	97.4	97.4	97.1	96.4	-0.7
	19–22	98.3	98.2	98.5	98.2	98.3	98.8	99.0	99.2	98.9	99.1	98.3	98.1	97.6	97.9	98.3	98.4	97.9	98.1	+0.2
	23–26	98.5	98.7	98.8	98.4	98.3	98.6	98.9	98.9	98.0	99.0	99.1	99.2	97.6	99.3	99.1	98.3	98.9	98.1	-0.8
	27–30	98.1	98.8	98.7	98.7	98.4	99.3	98.8	99.1	97.5	98.2	98.4	99.0	99.3	98.6	98.3	97.9	97.6	98.5	+1.0

(List of drugs continued.)

TABLE 6-2 (cont.)
Trends in Proportions Disapproving of Drug Use among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

Percentage disapproving [e]

Q. Do you disapprove of people (who are 18 or older) doing each of the following?	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Trying amphetamines once or twice [b,h]	18	75.4	71.1	72.6	72.3	72.8	74.9	76.5	80.7	82.5	83.3	85.3	86.5	86.9	84.2	81.3	82.2	79.9	81.3
	19–22	74.5	70.5	68.9	74.0	73.0	75.6	78.9	79.9	81.8	85.3	84.4	83.9	83.8	87.2	88.3	85.0	84.4	83.3
	23–26	—	—	—	—	74.2	74.2	74.6	80.3	83.5	83.3	84.1	84.8	83.4	84.8	82.7	86.0	86.4	85.7
	27–30	—	—	—	—	—	—	—	—	83.5	81.0	84.3	83.7	80.9	83.5	82.0	83.1	85.8	86.3
Taking amphetamines regularly [b,h]	18	93.0	91.7	92.0	92.6	93.6	93.3	93.5	95.4	94.2	94.2	95.5	96.0	95.6	96.0	94.1	94.3	93.5	94.3
	19–22	94.8	93.3	94.3	93.4	94.9	96.6	96.9	95.1	97.5	96.8	97.5	97.7	96.7	97.3	97.9	96.8	97.2	97.8
	23–26	—	—	—	—	96.6	95.9	96.6	97.0	97.2	98.1	97.9	97.9	97.7	98.4	97.7	97.0	97.9	97.0
	27–30	—	—	—	—	—	—	—	—	98.1	96.5	98.6	97.8	96.8	97.7	99.0	98.9	98.2	98.1
Trying sedatives/ barbiturates once or twice [c,h]	18	83.9	82.4	84.4	83.1	84.1	84.9	86.8	89.6	89.4	89.3	90.5	90.6	90.3	89.7	87.5	87.3	84.9	86.4
	19–22	83.5	82.3	83.8	85.1	85.2	86.1	88.3	87.5	90.1	92.0	91.1	90.4	88.8	90.7	91.1	90.5	89.1	86.6
	23–26	—	—	—	—	84.0	84.5	84.4	89.8	90.7	89.4	88.8	87.9	88.8	88.5	88.0	89.3	88.3	88.3
	27–30	—	—	—	—	—	—	—	—	90.5	88.3	88.4	88.8	86.6	88.9	87.6	88.0	89.4	88.8
Taking sedatives/ barbiturates regularly [c,h]	18	95.4	94.2	94.4	95.1	95.1	95.5	94.9	96.4	95.3	95.3	96.4	97.1	96.5	97.0	96.1	95.2	94.8	95.3
	19–22	96.6	95.6	97.3	96.5	96.6	98.1	98.0	97.0	97.9	97.7	98.7	98.0	97.9	98.2	98.7	97.7	97.9	97.7
	23–26	—	—	—	—	98.4	98.5	97.7	98.6	98.3	98.3	98.5	98.5	98.6	98.5	98.5	97.4	98.4	97.4
	27–30	—	—	—	—	—	—	—	—	98.4	97.1	99.1	98.5	97.7	98.4	99.1	99.0	98.5	97.9
Trying one or two drinks of an alcoholic beverage (beer, wine, liquor) [j]	18	16.0	17.2	18.2	18.4	17.4	20.3	20.9	21.4	22.6	27.3	29.4	29.8	33.0	30.1	28.4	27.3	26.5	26.1
	19–22	14.8	14.5	13.9	15.5	15.3	15.4	16.9	16.0	18.4	22.4	17.6	22.2	16.9	20.8	22.2	22.0	22.0	18.3
	23–26	—	—	—	—	17.4	16.1	13.2	17.7	13.7	17.5	18.6	19.5	17.4	18.1	17.6	16.5	18.0	15.8
	27–30	—	—	—	—	—	—	—	—	19.5	19.1	18.7	18.8	17.9	19.5	18.6	18.2	16.1	17.4
Taking one or two drinks nearly every day [j]	18	69.0	69.1	69.9	68.9	72.9	70.9	72.8	74.2	75.0	76.5	77.9	76.5	75.9	77.8	73.1	73.3	70.8	70.0
	19–22	67.8	69.7	71.3	73.3	74.3	71.3	77.4	75.3	76.5	80.0	79.7	77.1	76.0	75.0	78.0	74.7	73.5	73.2
	23–26	—	—	—	—	71.4	73.7	71.6	72.7	74.6	74.4	77.6	76.9	75.5	74.2	73.3	69.7	70.6	68.4
	27–30	—	—	—	—	—	—	—	—	76.0	73.9	73.3	76.1	69.5	73.5	72.4	71.8	71.4	71.8
Taking four or five drinks nearly every day [j]	18	90.8	91.8	90.9	90.0	91.0	92.0	91.4	92.2	92.8	91.6	91.9	90.6	90.8	90.6	89.8	88.8	89.4	88.6
	19–22	95.2	93.4	94.6	94.6	94.6	94.8	94.9	95.7	94.8	96.1	95.8	96.4	95.5	95.1	96.2	95.5	94.2	93.9
	23–26	—	—	—	—	96.2	95.0	95.5	96.9	94.3	95.9	96.9	96.1	95.7	95.7	95.7	95.2	96.5	93.8
	27–30	—	—	—	—	—	—	—	—	97.4	94.6	96.1	95.3	94.8	94.8	96.4	96.7	96.4	96.2
Having five or more drinks once or twice each weekend [j]	18	55.6	55.5	58.8	56.6	59.6	60.4	62.4	62.0	65.3	66.5	68.9	67.4	70.7	70.1	65.1	66.7	64.7	65.0
	19–22	57.1	56.1	58.2	61.0	59.7	59.4	60.3	61.6	64.1	66.3	67.1	62.4	65.6	63.5	68.1	66.0	69.2	66.5
	23–26	—	—	—	—	66.2	68.3	66.5	67.5	65.2	63.2	66.9	64.6	69.6	66.8	66.9	65.3	70.9	66.6
	27–30	—	—	—	—	—	—	—	—	73.9	71.4	73.1	72.1	68.4	73.4	73.5	73.7	72.4	73.0
Smoking one or more packs of cigarettes per day [j]	18	70.8	69.9	69.4	70.8	73.0	72.3	75.4	74.3	73.1	72.4	72.8	71.4	73.5	70.6	69.8	68.2	67.2	67.1
	19–22	68.7	68.1	66.3	71.6	69.0	70.5	71.4	72.7	73.8	75.6	73.7	73.2	72.6	72.8	75.3	69.8	72.2	74.3
	23–26	—	—	—	—	69.9	68.7	67.5	69.7	66.4	71.1	71.5	77.2	73.6	72.9	70.3	72.2	73.0	71.7
	27–30	—	—	—	—	—	—	—	—	72.8	69.4	73.5	71.2	70.7	73.8	72.3	73.9	72.7	74.3
Approximate Weighted N Per Form =	18	*3,261*	*3,610*	*3,651*	*3,341*	*3,254*	*3,265*	*3,113*	*3,302*	*3,311*	*2,799*	*2,566*	*2,547*	*2,645*	*2,723*	*2,588*	*2,603*	*2,399*	*2,601*
	19–22	*588*	*573*	*605*	*579*	*586*	*551*	*605*	*587*	*560*	*567*	*569*	*533*	*530*	*489*	*474*	*465*	*480*	*470*
	23–26					*542*	*535*	*560*	*532*	*538*	*516*	*524*	*495*	*538*	*514*	*475*	*466*	*449*	*423*
	27–30									*526*	*509*	*513*	*485*	*512*	*462*	*442*	*450*	*430*	*453*

(Table continued on next page.)

TABLE 6-2 (cont.)
Trends in Proportions Disapproving of Drug Use
among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

Q. Do you disapprove of people (who are 18 or older) doing each of the following?	Age Group	Percentage disapproving [e] 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Trying amphetamines once or twice [b,h]	18	82.5	81.9	82.1	82.3	83.8	85.8	84.1	86.1	86.3	87.3	87.2	88.2	88.1	84.1	83.9	84.9	83.1	81.4	-1.7
	19–22	84.6	84.9	83.8	82.1	81.4	86.3	82.1	88.2	84.9	84.8	86.7	85.4	86.9	80.5	81.3	83.7	73.6	76.4	+2.8
	23–26	83.5	84.5	82.4	83.9	83.5	79.9	81.6	81.3	79.0	85.8	79.7	84.4	84.1	76.5	80.7	77.3	81.4	76.9	-4.5
	27–30	85.9	86.4	84.5	86.0	86.4	84.9	82.4	81.3	81.1	84.5	83.7	82.9	84.3	81.1	81.9	81.5	80.8	74.6	-6.2
Taking amphetamines regularly [b,h]	18	94.0	93.7	94.1	93.4	93.5	94.0	93.9	94.8	95.3	95.4	94.2	95.6	94.9	92.9	93.9	93.2	93.0	92.2	-0.7
	19–22	96.7	97.5	96.1	97.3	96.4	97.1	97.1	98.4	97.5	98.6	96.2	96.8	96.2	92.1	94.1	94.4	92.8	94.0	+1.2
	23–26	98.0	97.0	97.6	96.8	96.3	97.2	95.9	98.3	96.2	97.6	97.3	98.1	96.8	94.8	95.9	94.6	92.4	93.7	+1.3
	27–30	97.7	98.2	98.5	97.6	97.4	98.1	98.0	97.6	96.4	98.4	97.2	98.1	98.0	97.5	95.8	96.8	96.3	94.8	-1.5
Trying sedatives/ barbiturates once or twice [c,h]	18	86.0	86.6	85.9	85.9	86.6	87.8	83.7	85.4	85.3	86.5	86.1	87.7	87.6	87.3	88.2	88.9	88.5	87.4	-1.1
	19–22	85.8	86.6	84.2	85.2	84.2	87.7	81.8	86.6	83.4	82.7	82.1	84.7	85.2	85.4	88.0	88.6	86.3	87.1	+0.9
	23–26	87.4	87.3	85.2	86.9	86.8	81.8	80.3	81.6	80.5	84.3	77.7	83.3	80.9	80.6	83.8	84.4	84.4	84.5	0.0
	27–30	88.4	87.6	87.3	88.5	86.9	89.2	81.8	78.7	80.1	83.5	80.5	82.5	80.3	83.3	83.1	82.6	82.5	81.2	-1.3
Taking sedatives/ barbiturates regularly [c,h]	18	94.6	94.7	95.2	94.5	94.7	94.4	94.2	95.2	95.1	94.6	94.3	95.8	94.7	95.1	96.1	95.8	95.0	94.7	-0.3
	19–22	97.7	97.3	97.4	96.9	97.8	98.5	96.6	98.3	98.1	98.3	96.7	96.7	96.3	96.7	96.4	96.5	97.8	96.7	-1.1
	23–26	98.5	97.6	97.4	97.0	97.1	97.1	96.1	98.0	96.3	97.8	96.7	98.4	95.7	98.1	97.3	97.2	96.6	95.7	-0.9
	27–30	97.7	98.5	98.1	98.4	97.2	98.4	98.1	96.5	95.6	97.4	97.4	98.4	98.6	97.0	97.7	97.1	97.4	97.7	+0.3
Trying one or two drinks of an alcoholic beverage (beer, wine, liquor) [j]	18	24.5	24.6	25.2	26.6	26.3	27.2	26.0	26.4	29.0	31.0	29.8	30.6	30.7	28.7	25.4	27.3	29.2	28.9	-0.2
	19–22	21.5	18.3	18.4	16.3	18.3	20.1	20.7	22.3	17.8	17.3	20.5	19.1	23.7	21.6	21.4	19.6	17.9	17.5	-0.4
	23–26	18.6	19.1	19.9	15.9	18.1	13.0	16.3	13.5	14.7	14.9	12.5	16.0	15.4	10.9	14.1	13.5	14.2	12.8	-1.4
	27–30	15.2	15.9	14.8	15.9	18.4	15.4	18.8	16.1	15.0	14.2	11.9	11.5	13.3	11.8	14.7	13.2	11.7	12.1	+0.4
Taking one or two drinks nearly every day [j]	18	69.4	67.2	70.0	69.2	69.1	68.9	69.5	70.8	72.8	73.3	74.5	70.5	71.5	72.8	70.8	71.9	71.7	71.1	-0.6
	19–22	70.3	67.3	66.7	68.3	63.9	66.9	68.1	64.6	68.2	65.1	65.2	67.4	68.4	71.0	65.7	64.0	61.6	63.3	+1.8
	23–26	70.2	73.4	66.3	66.5	62.7	65.0	61.7	64.4	62.0	62.4	66.4	62.0	62.5	55.7	53.9	54.4	53.3	53.4	+0.1
	27–30	69.8	67.9	65.9	68.9	70.9	63.1	66.7	60.5	62.0	65.8	59.5	63.7	61.4	61.7	55.6	51.3	52.0	54.8	+2.8
Taking four or five drinks nearly every day [j]	18	86.7	86.9	88.4	86.4	87.5	86.3	87.8	89.4	90.6	90.5	89.8	89.7	88.8	90.8	90.1	90.6	91.9	89.7	-2.2 s
	19–22	92.4	92.4	92.8	94.2	92.6	92.5	92.2	93.2	92.9	92.9	94.0	93.6	92.2	93.9	91.9	92.1	91.1	92.1	+1.1
	23–26	96.1	95.1	94.3	93.5	93.7	92.6	93.1	94.8	92.9	95.6	94.9	94.6	93.9	94.7	92.8	91.8	91.4	92.4	+1.1
	27–30	95.0	97.2	95.3	96.1	95.4	95.6	96.0	92.8	92.7	95.0	93.9	96.0	94.3	95.8	92.1	92.1	93.4	91.8	-1.6
Having five or more drinks once or twice each weekend [j]	18	63.8	62.7	65.2	62.9	64.7	64.2	65.7	66.5	68.5	68.8	68.9	67.6	68.8	70.0	70.1	71.6	72.6	71.9	-0.7
	19–22	63.2	63.5	65.1	58.3	57.5	61.9	59.4	60.1	59.3	59.1	63.4	62.3	62.7	65.4	64.7	66.3	64.7	66.6	+1.9
	23–26	69.5	68.1	66.2	66.0	61.2	65.5	60.9	64.5	59.7	62.4	63.0	59.5	61.7	55.9	63.0	63.3	62.0	62.6	+0.6
	27–30	71.1	73.1	73.1	73.0	70.9	71.5	73.8	67.5	67.3	71.5	66.4	65.8	67.5	64.9	63.3	65.0	64.1	66.1	+2.0
Smoking one or more packs of cigarettes per day [j]	18	68.8	69.5	70.1	71.6	73.6	74.8	76.2	79.8	81.5	80.7	80.5	81.8	81.0	83.0	83.7	82.6	85.0	84.1	-1.0
	19–22	72.3	70.1	73.1	73.2	73.4	73.4	74.8	81.5	77.2	81.0	80.4	81.8	82.9	83.8	79.5	81.0	80.6	82.7	+2.1
	23–26	73.9	73.8	72.7	77.3	74.8	75.7	76.2	74.8	74.1	76.2	77.9	77.3	77.9	80.3	78.2	77.8	80.0	80.3	+0.2
	27–30	71.7	71.0	78.6	75.2	78.8	76.2	77.6	77.3	73.9	81.1	74.5	80.9	79.6	79.5	79.1	79.9	79.9	82.2	+2.3
Approximate Weighted N Per Form =	18	*2,545*	*2,310*	*2,150*	*2,144*	*2,160*	*2,442*	*2,455*	*2,460*	*2,377*	*2,450*	*2,314*	*2,233*	*2,449*	*2,384*	*2,301*	*2,147*	*2,078*	*2,193*	
	19–22	*446*	*449*	*416*	*413*	*402*	*396*	*431*	*378*	*378*	*333*	*365*	*368*	*364*	*340*	*356*	*280*	*316*	*264*	
	23–26	*401*	*397*	*389*	*404*	*346*	*385*	*403*	*374*	*364*	*325*	*335*	*328*	*347*	*309*	*334*	*312*	*308*	*284*	
	27–30	*449*	*429*	*395*	*368*	*359*	*346*	*370*	*367*	*330*	*355*	*339*	*325*	*334*	*306*	*312*	*301*	*304*	*262*	

Source. The Monitoring the Future study, the University of Michigan.

Footnotes for Tables 6-1 through 6-2

Notes. Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001.
Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.
The illicit drugs not listed here show a daily prevalence of 0.2% or less in all years.
' * ' indicates a prevalence rate of less than 0.05%.
' — ' indicates data not available.

[a]Answer alternatives were: (1) No risk, (2) Slight risk, (3) Moderate risk, (4) Great risk, and (5) Can't say, drug unfamiliar.

[b]In 2011 the list of examples was changed from upper, pep pills, bennies, and speed to uppers, speed, Adderall, Ritalin, etc. These changes likely explain the discontinuity in the 2011 results.

[c]In 2004 the question text was changed from barbiturates to sedatives/barbiturates and the list of examples was changed from downers, goofballs, reds, yellows, etc. to just downers.
These changes likely explain the discontinuity in the 2003 and 2004 results.

[d]For 12th graders only: In 2011 the question on perceived risk of using salvia once or twice appeared at the end of a questionnaire form. In 2012 the question was moved to an earlier section of the same form. A question on perceived risk of using salvia occasionally was also added following the question on perceived risk of trying salvia once or twice. These changes likely explain the discontinuity in the 2012 result.

[e]Answer alternatives were: (1) Don't disapprove, (2) Disapprove, and (3) Strongly disapprove. Percentages are shown for categories (2) and (3) combined.

[f]Age 18 data based on one questionnaire form for all years reported. For ages 19-30 only: Prior to 2012, data based on one questionnaire form. Data based on five questionnaire forms in 2012-2014.

[g]Age 18 data based on one questionnaire form for all years reported. For ages 19-30 only: Prior to 2012, data based on one questionnaire form. Data based on two questionnaire forms in 2012-2014.

[h]Data based on one questionnaire form.

[i]Age 18 data based on one questionnaire form for all years reported. For ages 19-30 only: Prior to 2012, data based on one questionnaire form. Data based on three questionnaire forms in 2012-2014.

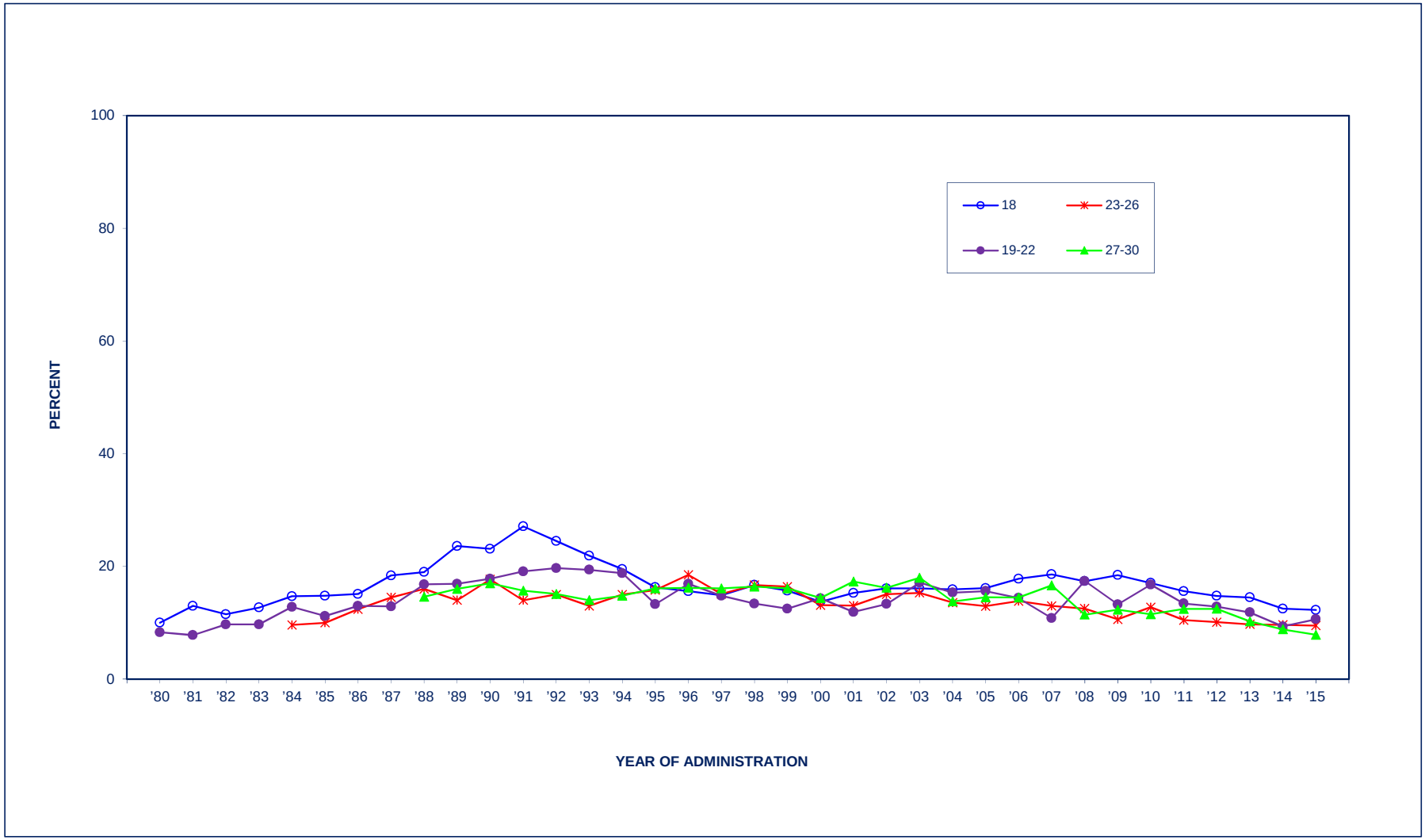
[j]Age 18 data based on one questionnaire form for all years reported. For ages 19-30 only: Prior to 2012, data based on one questionnaire form. Data based on four questionnaire forms in 2012-2014.

[k]Age 18 data based on one questionnaire form for all years reported. For ages 19-30 only: Prior to 2012, data based on one questionnaire form. Data based on two questionnaire forms in 2012-2013. Data based on one questionnaire form in 2014.

[l]Data based on two questionnaire forms for all years reported.

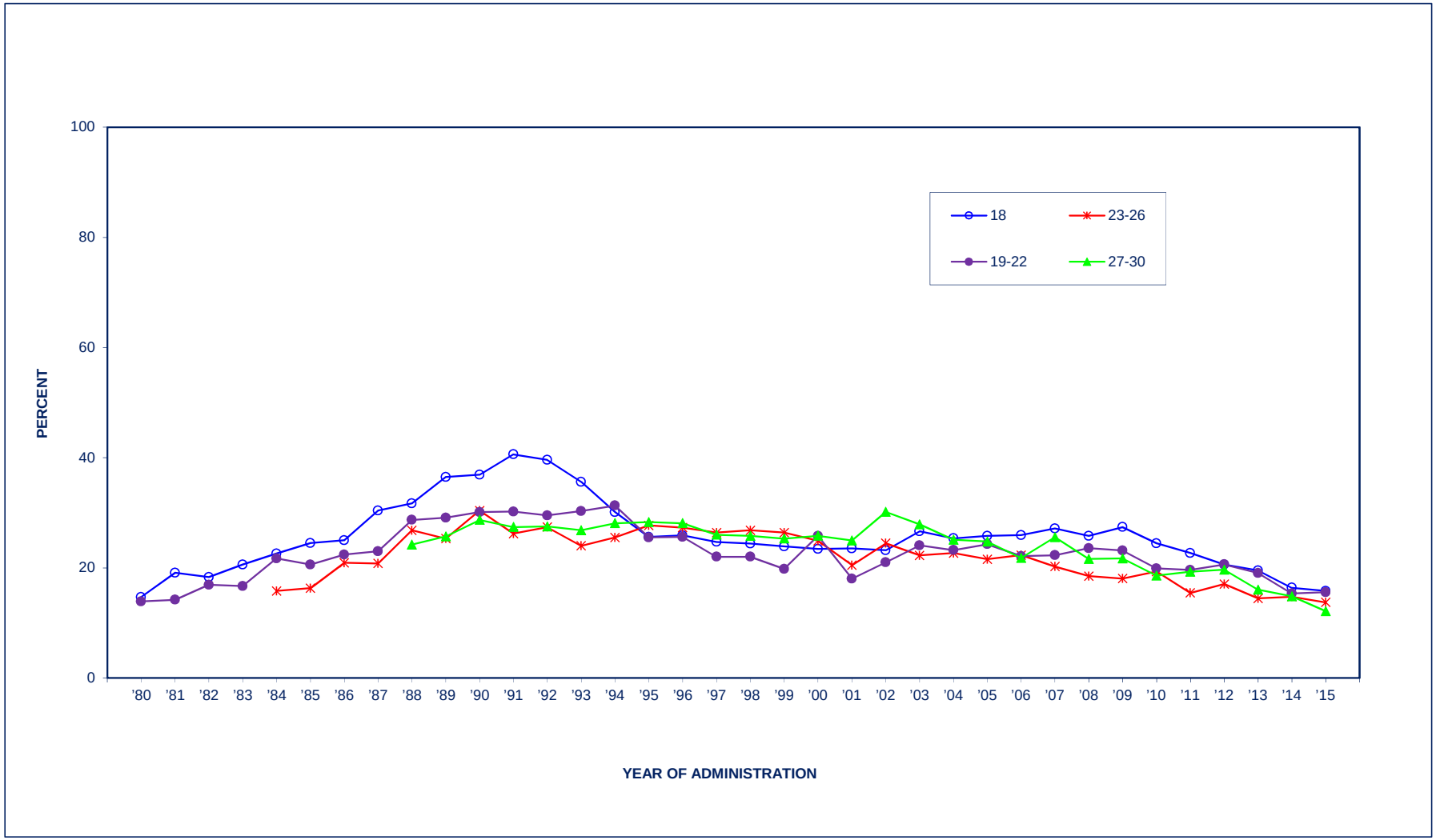
[m]Beginning in 2014 for Age 18 and 2015 for the other age groups, "molly" was added to the questions on perceived risk of using MDMA. The same change was made to the questions on disapproval of MDMA use for all age groups in 2015. Data for the two versions of the questions are not comparable due to this change in the question text.

FIGURE 6-1
Trends in Harmfulness of MARIJUANA Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30 Trying Once or Twice



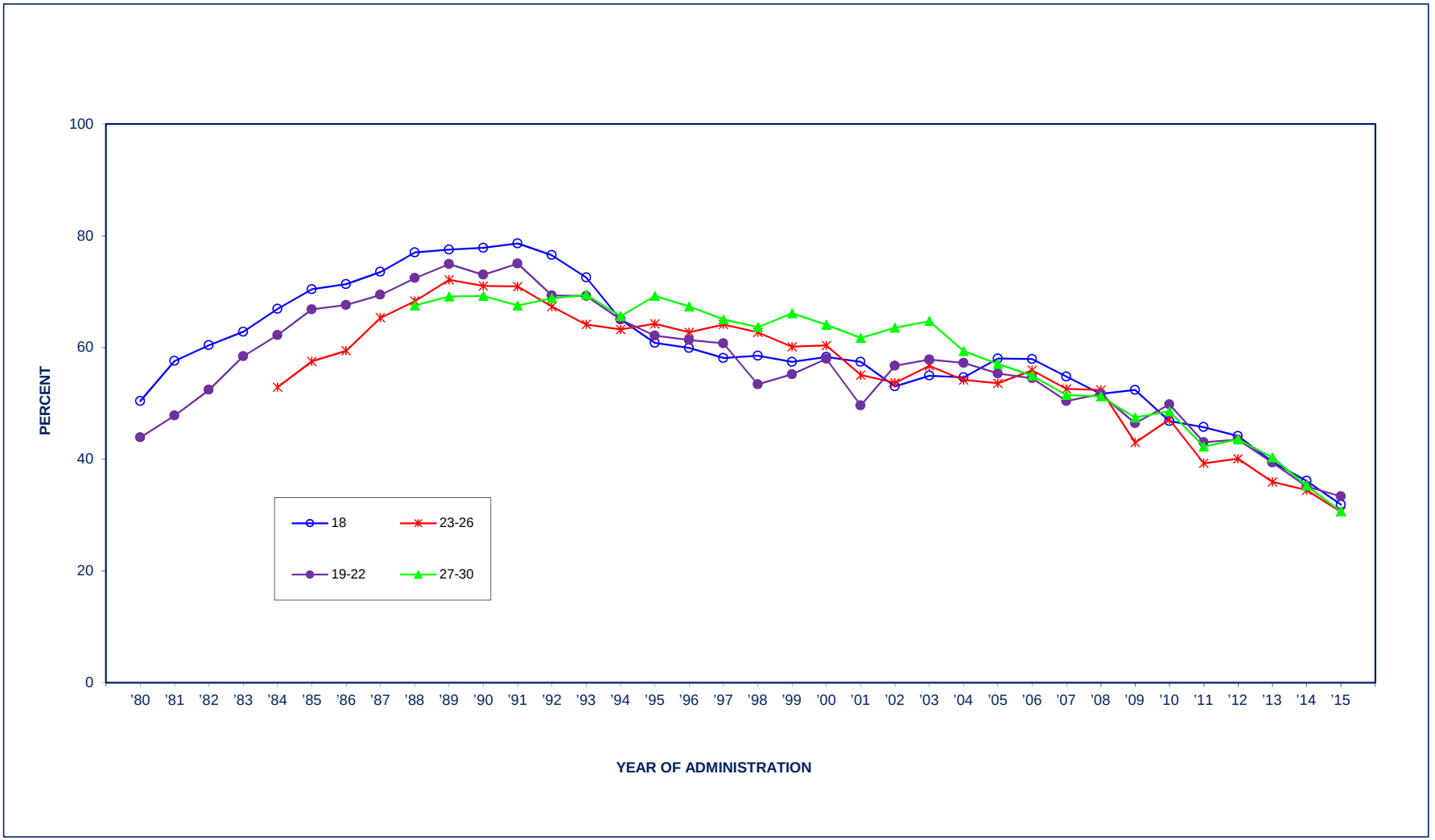
Source. The Monitoring the Future study, the University of Michigan.

FIGURE 6-2
Trends in Harmfulness of MARIJUANA Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30
Occasional Use



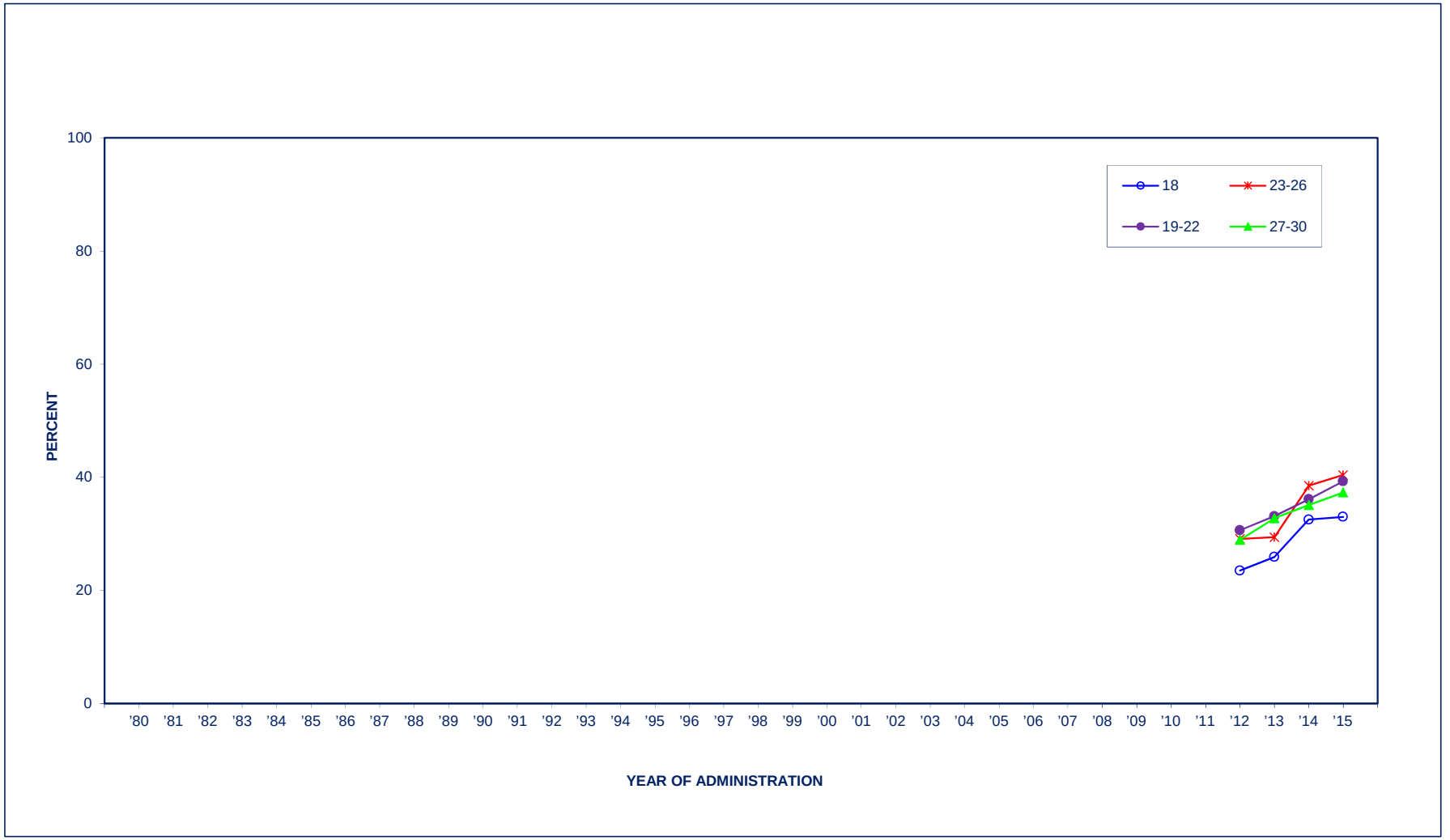
Source. The Monitoring the Future study, the University of Michigan.

FIGURE 6-3
Trends in Harmfulness of MARIJUANA Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30
Regular Use



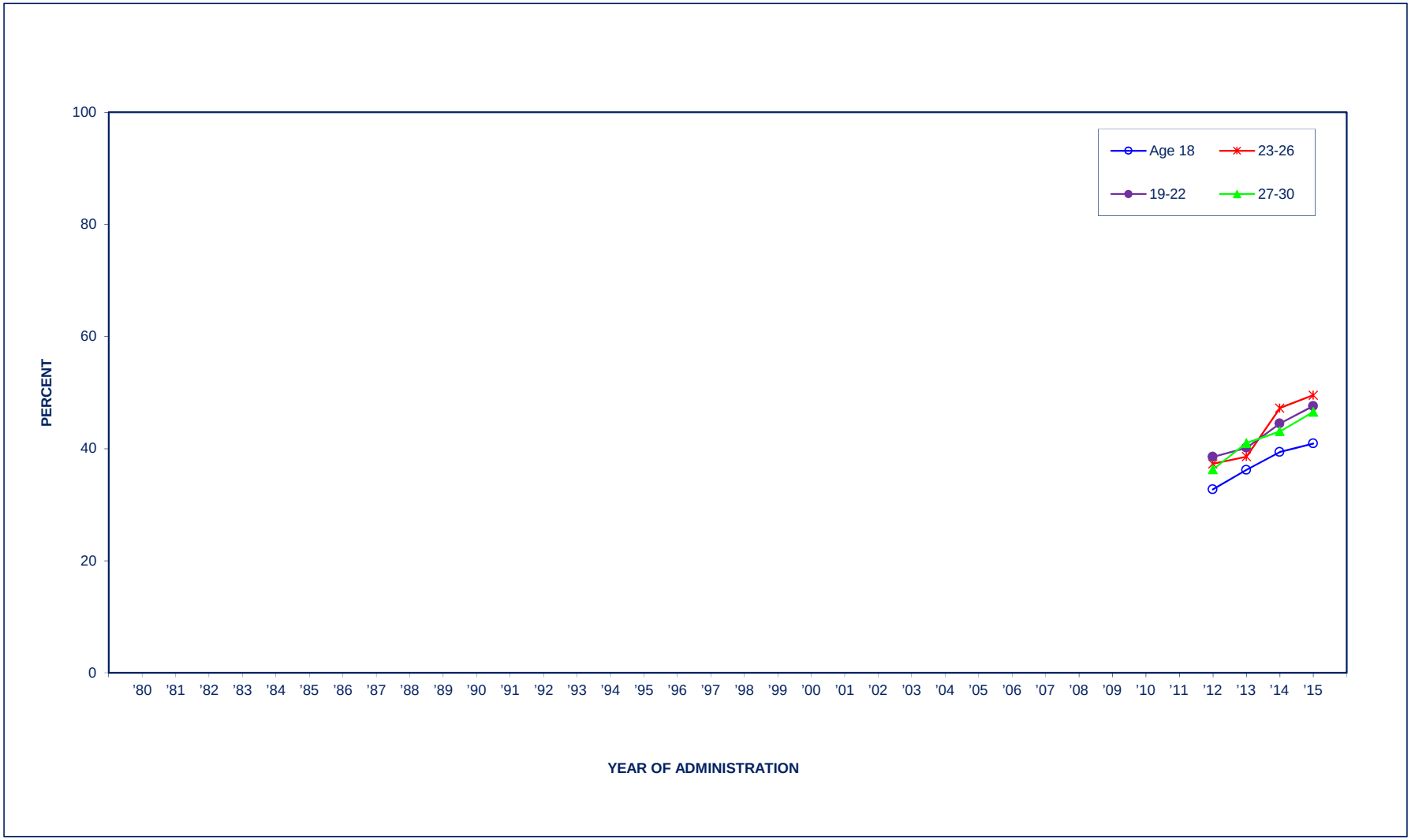
Source. The Monitoring the Future study, the University of Michigan.

FIGURE 6-4
Trends in Harmfulness of SYNTHETIC MARIJUANA Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30
Trying Once or Twice



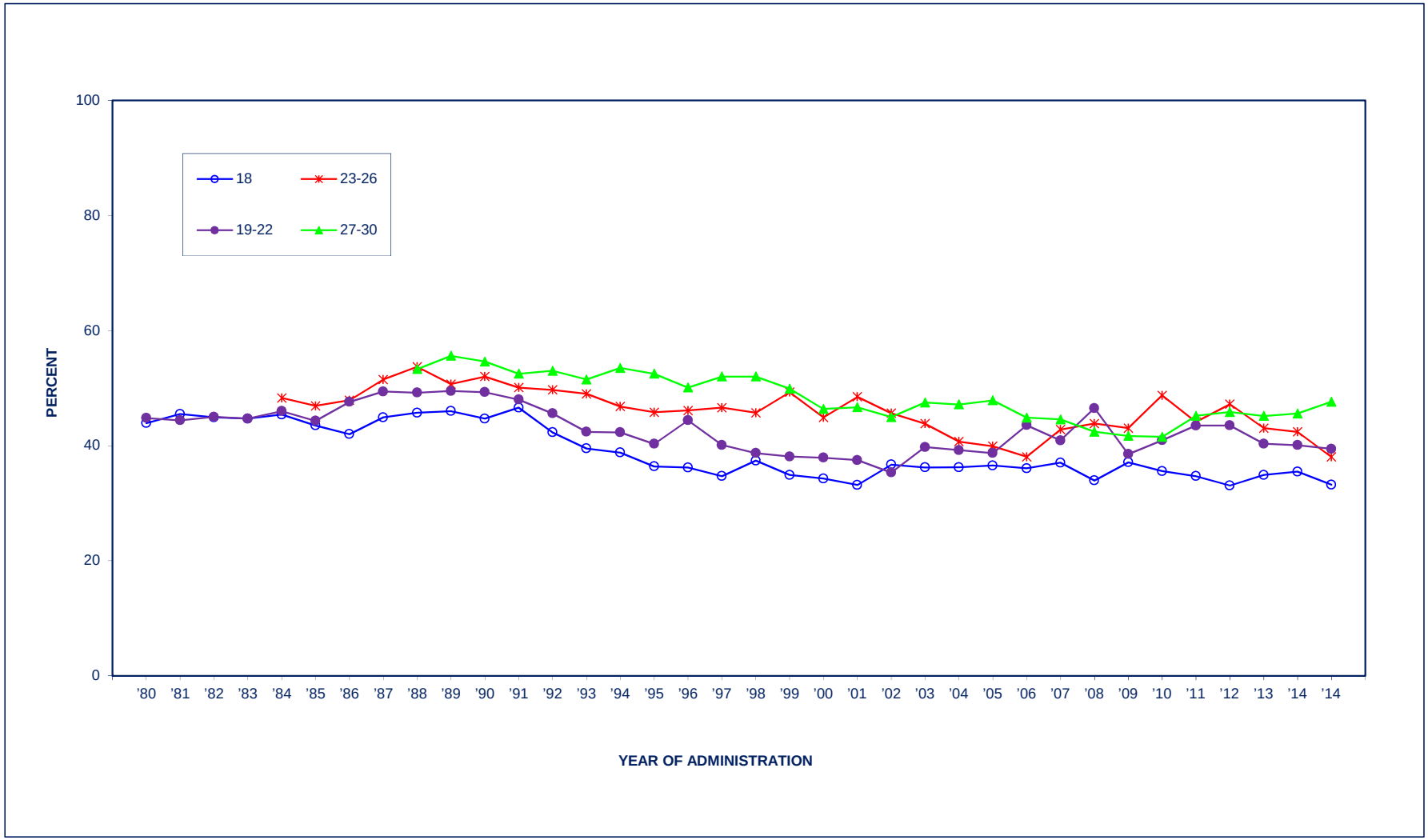
Source. The Monitoring the Future study, the University of Michigan.

FIGURE 6-5
Trends in Harmfulness of SYNTHETIC MARIJUANA Use as Perceived by Respondents in Modal Age Groups of 19–22, 23–26, and 27–30
Occasional Use



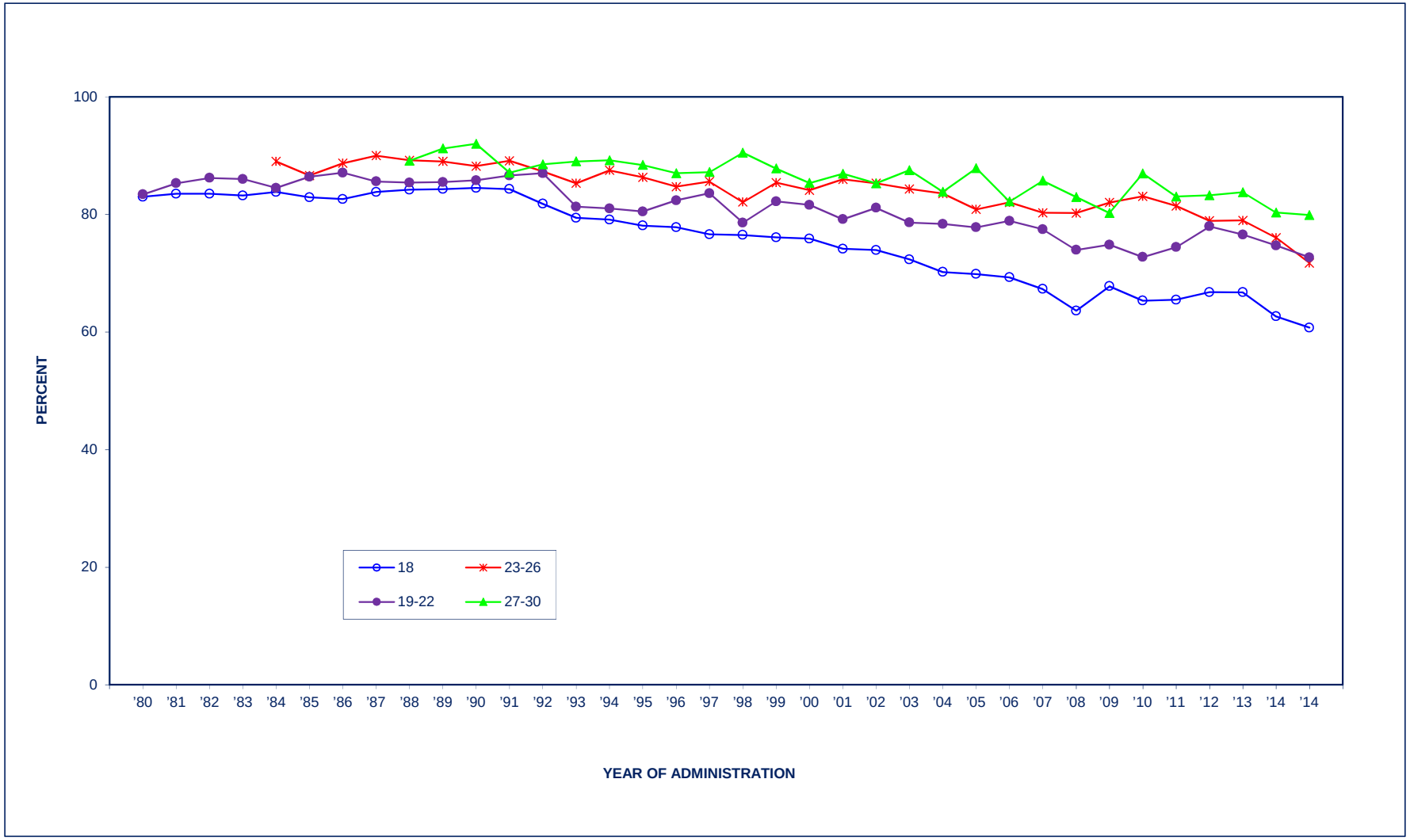
Source. The Monitoring the Future study, the University of Michigan.

FIGURE 6-6
Trends in Harmfulness of LSD Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30 Trying Once or Twice



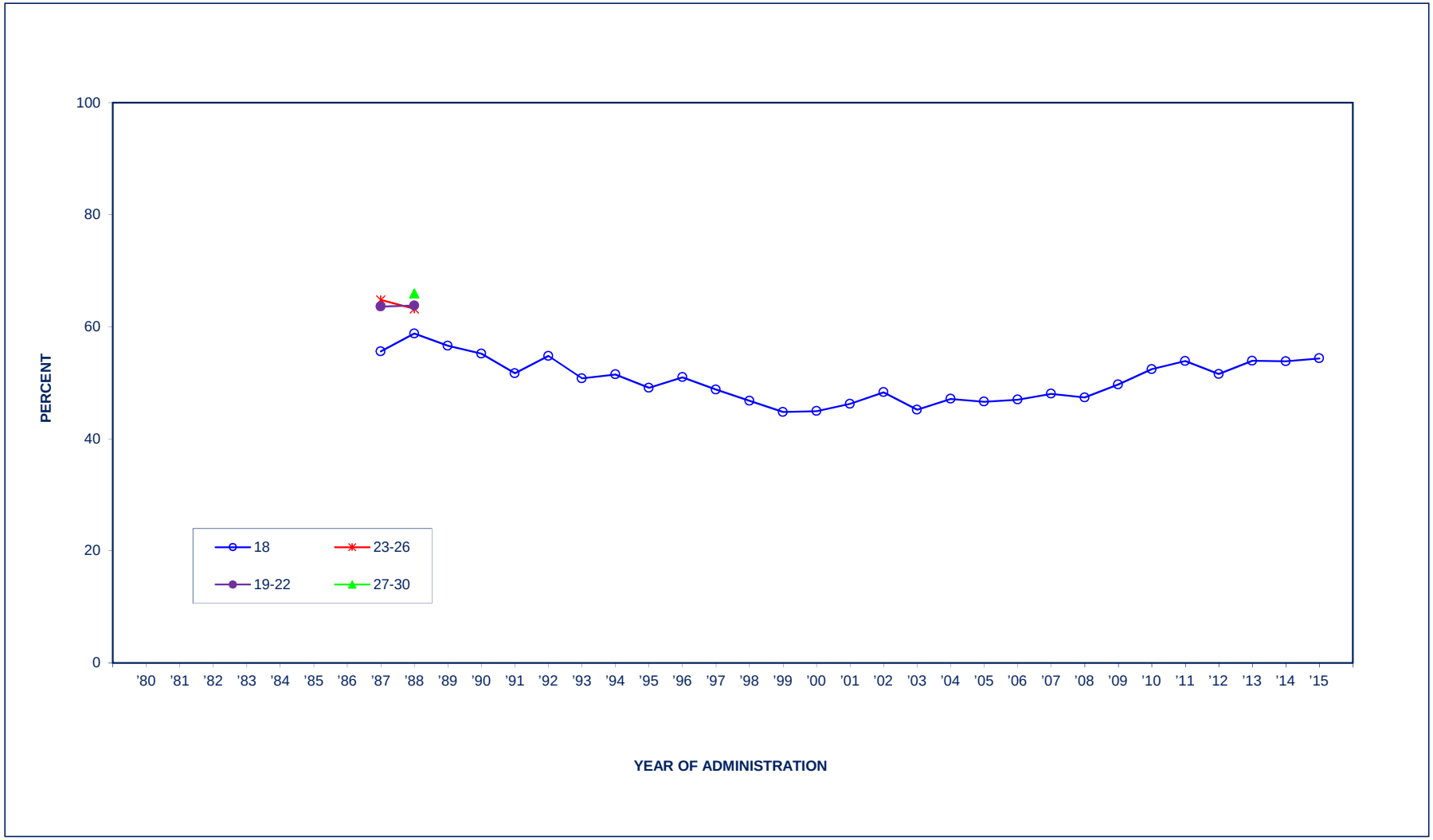
Source. The Monitoring the Future study, the University of Michigan.

FIGURE 6-7
Trends in Harmfulness of LSD Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30
Regular Use



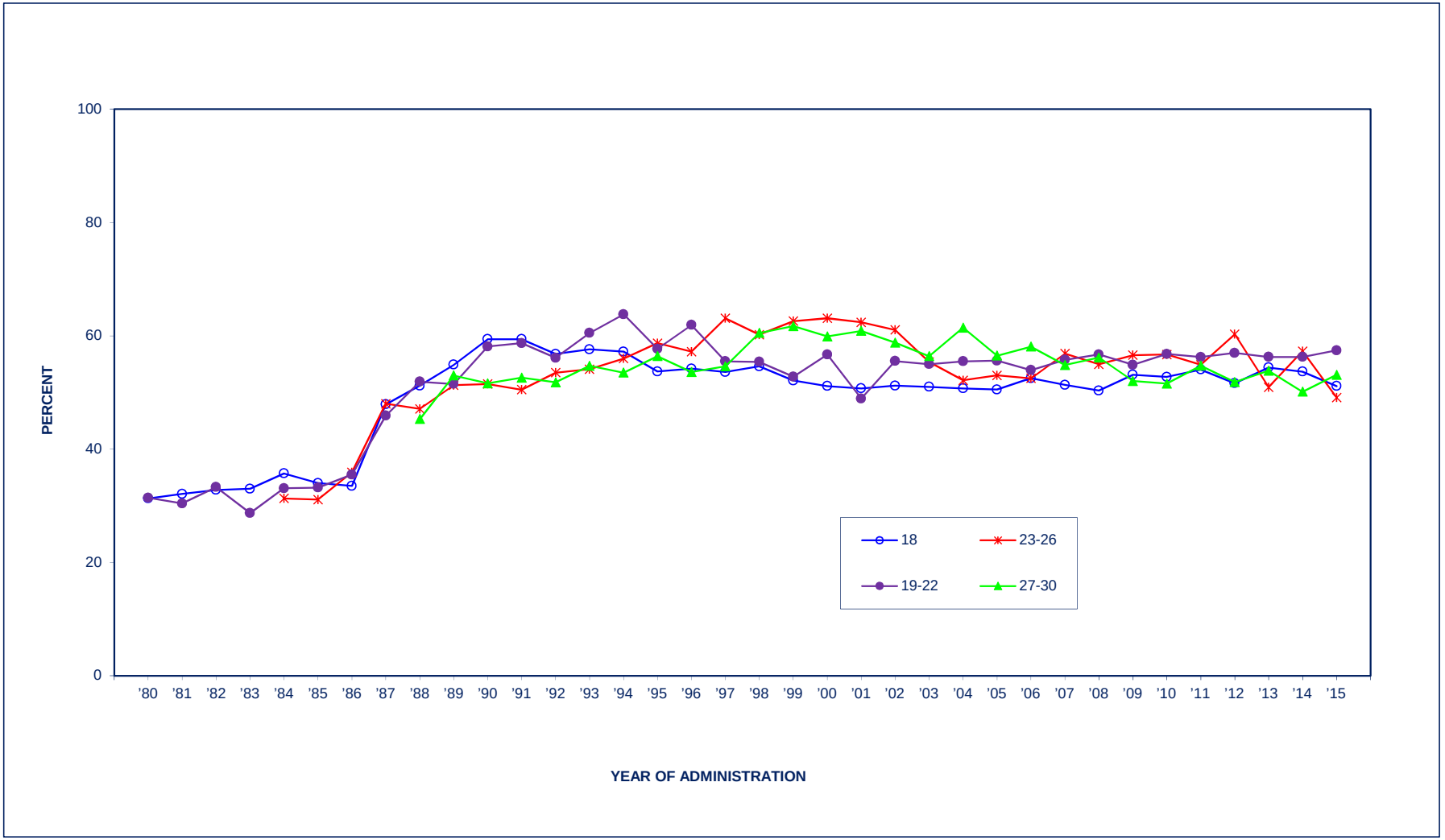
Source. The Monitoring the Future study, the University of Michigan.

FIGURE 6-8
Trends in Harmfulness of PCP Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30 Trying Once or Twice



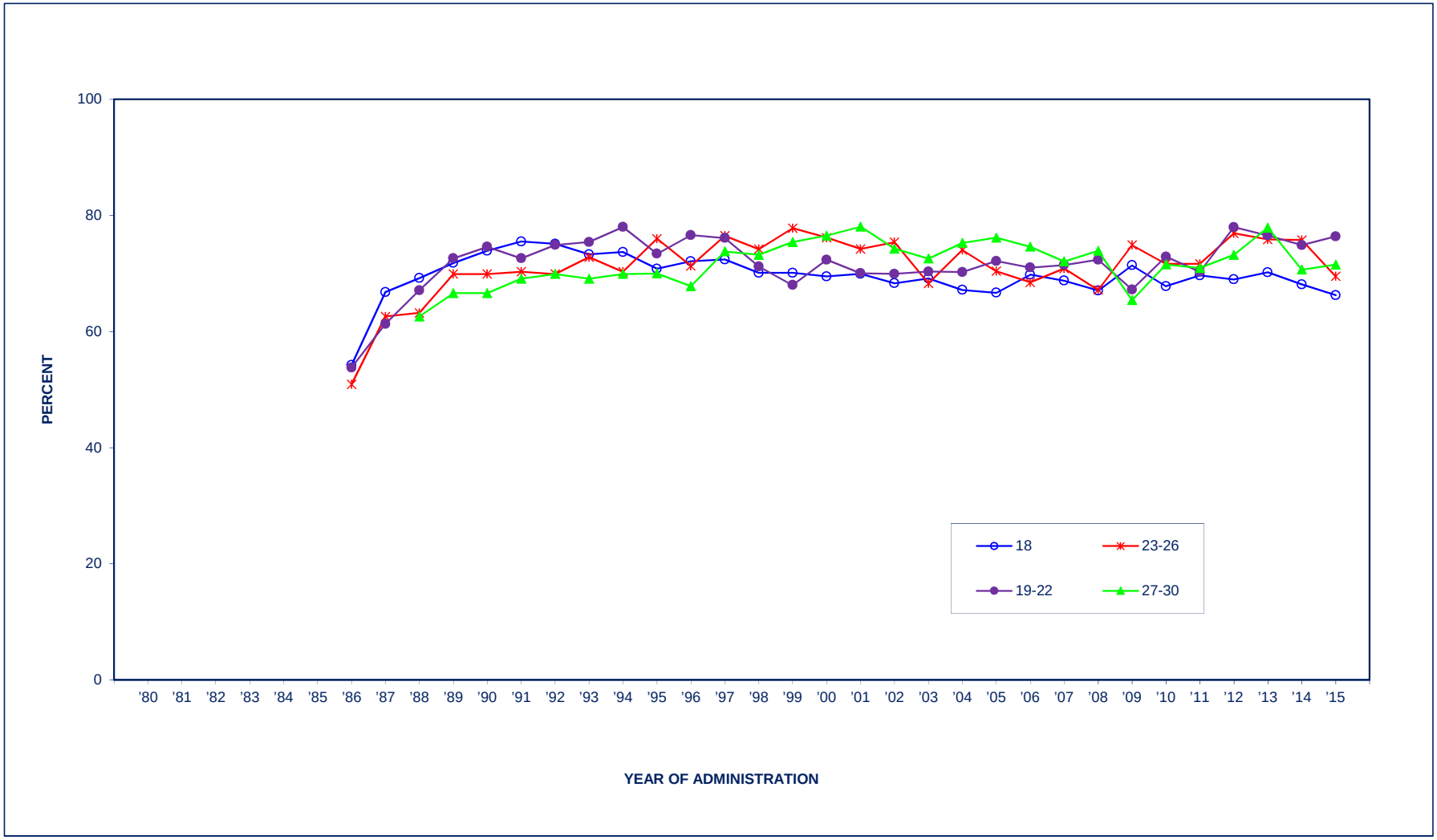
Source. The Monitoring the Future study, the University of Michigan.

FIGURE 6-9
Trends in Harmfulness of COCAINE Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30 Trying Once or Twice



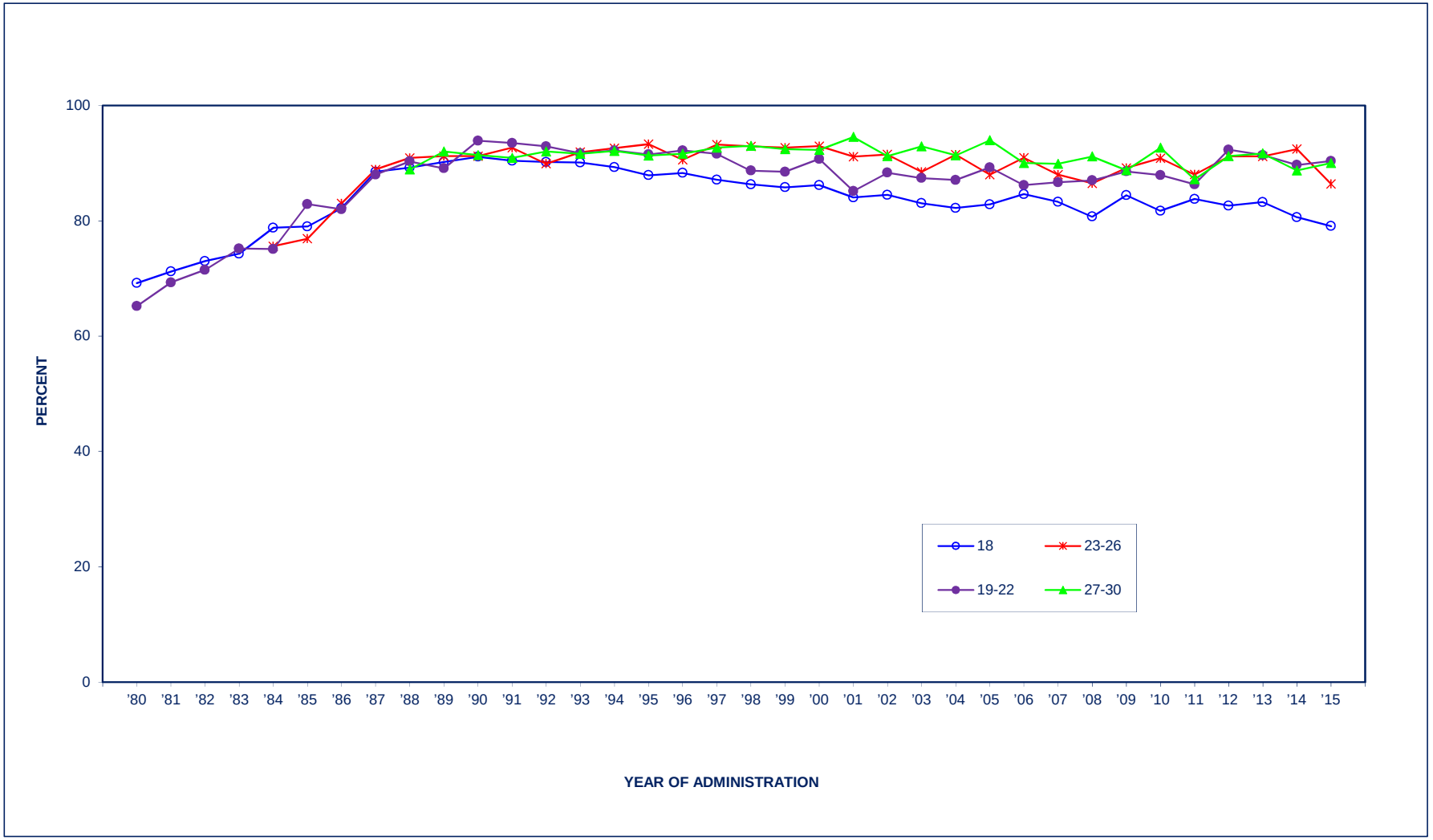
Source. The Monitoring the Future study, the University of Michigan.

FIGURE 6-10
Trends in Harmfulness of COCAINE Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30
Occasional Use



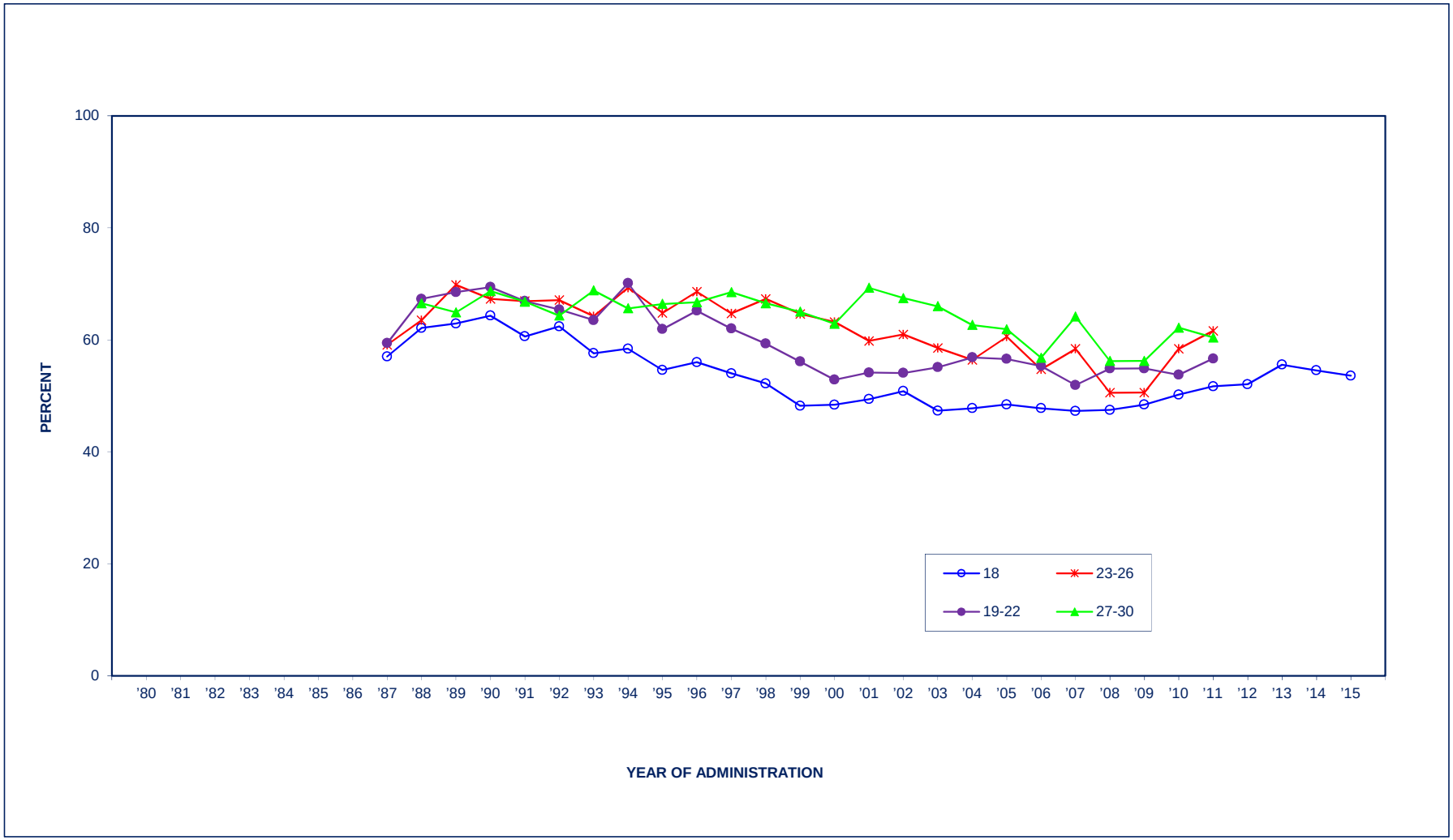
Source. The Monitoring the Future study, the University of Michigan.

FIGURE 6-11
Trends in Harmfulness of COCAINE Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30
Regular Use



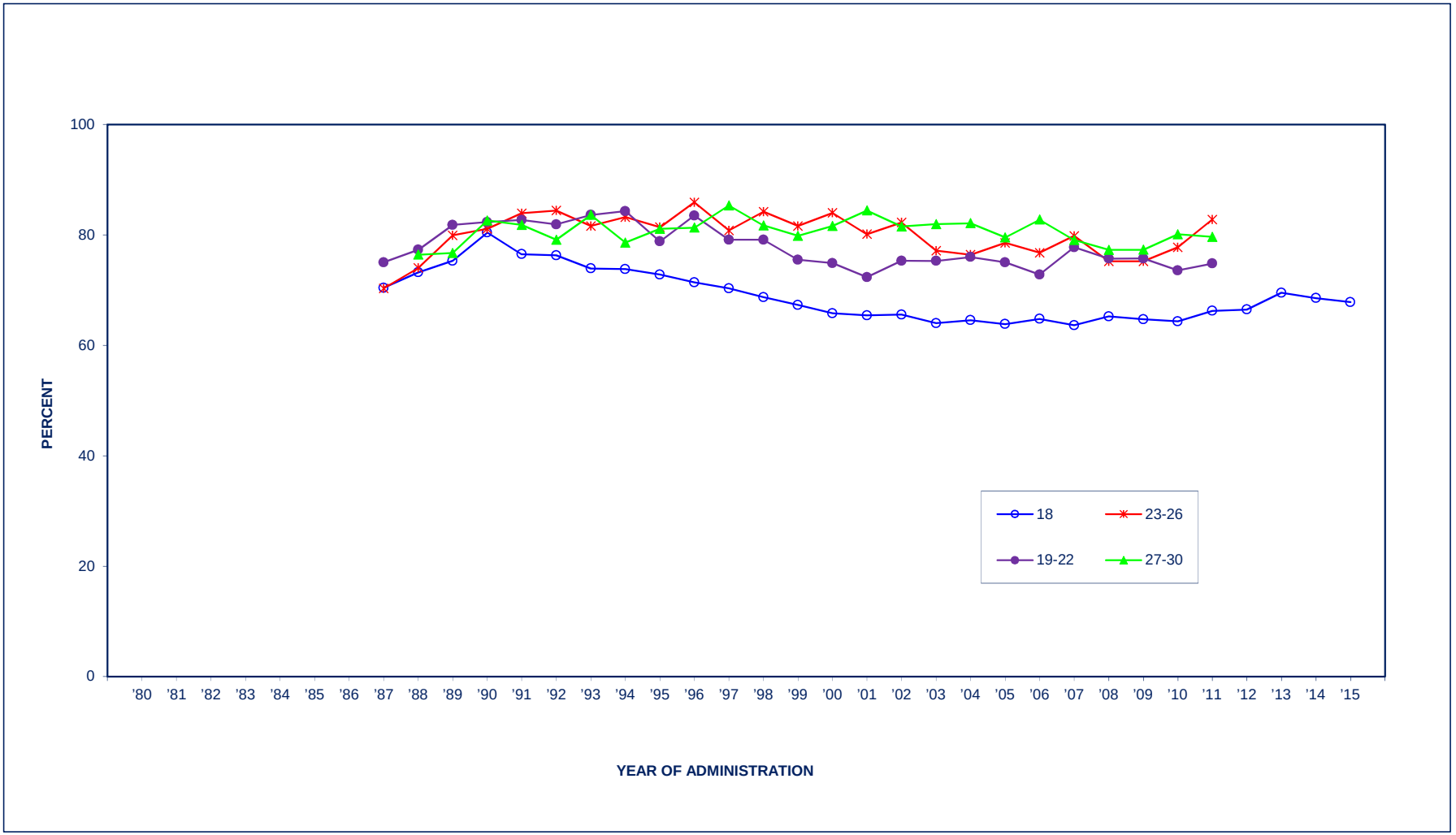
Source. The Monitoring the Future study, the University of Michigan.

FIGURE 6-12
Trends in Harmfulness of CRACK COCAINE Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30 Trying Once or Twice



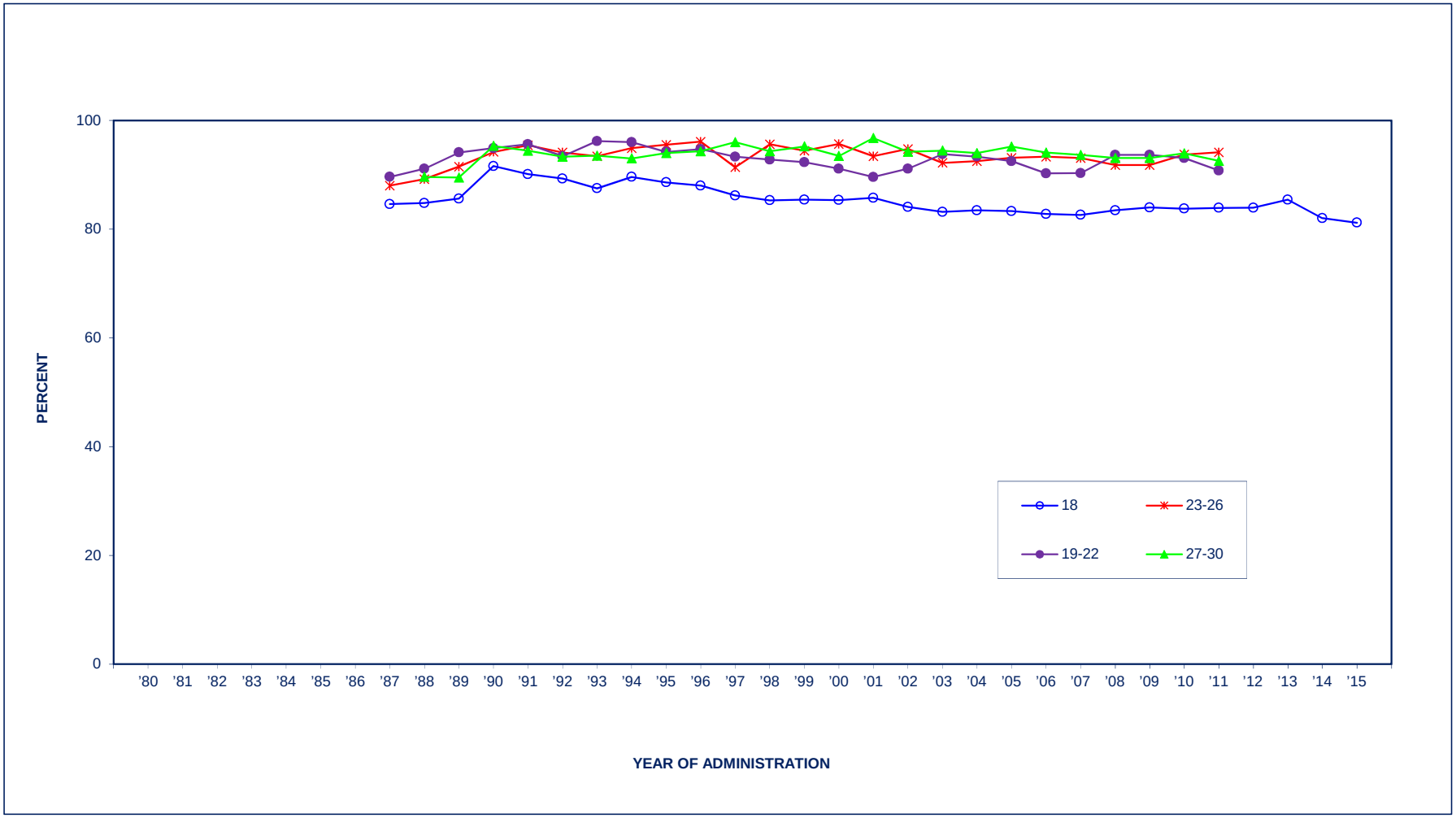
Source. The Monitoring the Future study, the University of Michigan.

FIGURE 6-13
Trends in Harmfulness of CRACK COCAINE Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30
Occasional Use



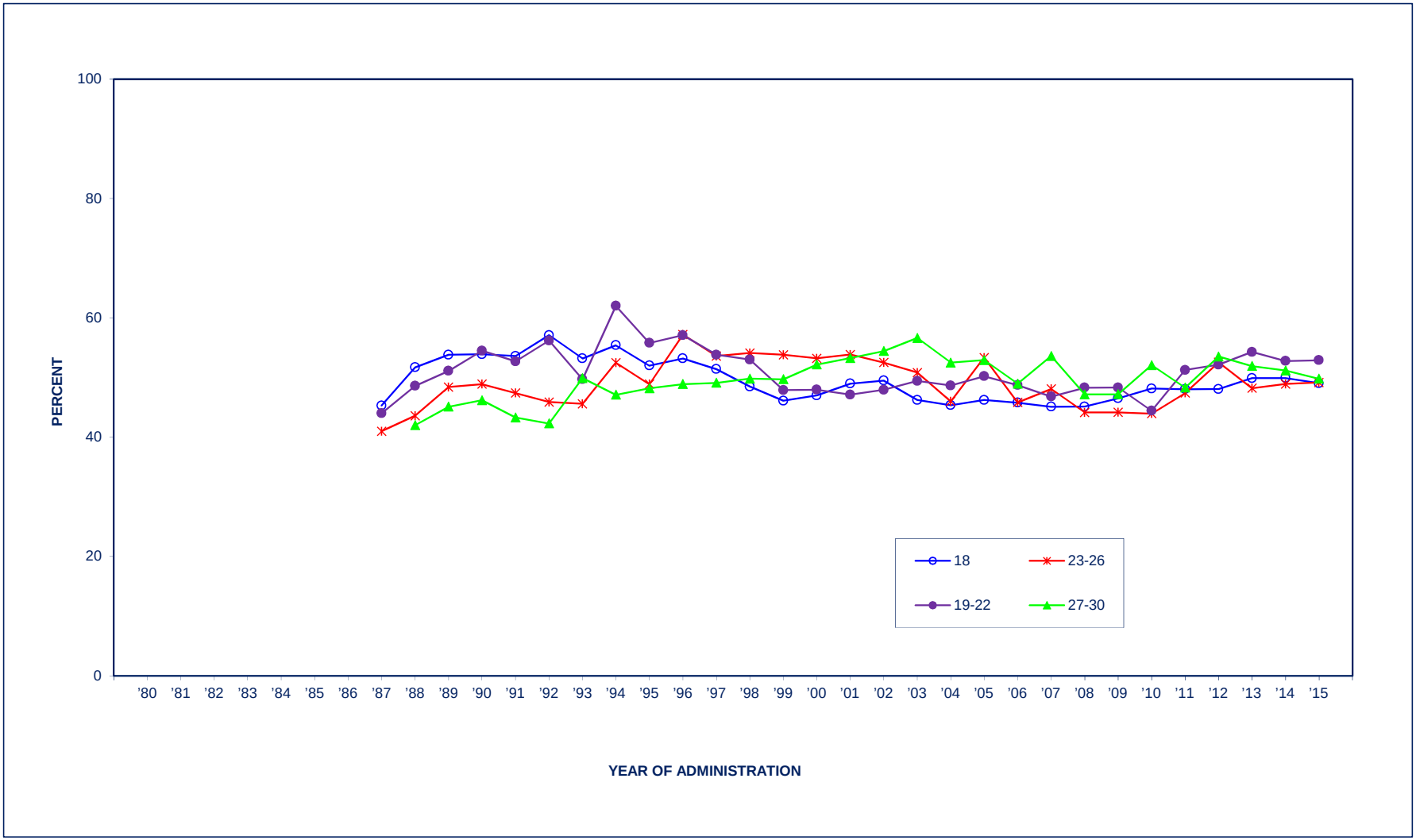
Source. The Monitoring the Future study, the University of Michigan.

FIGURE 6-14
Trends in Harmfulness of CRACK COCAINE Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30
Regular Use



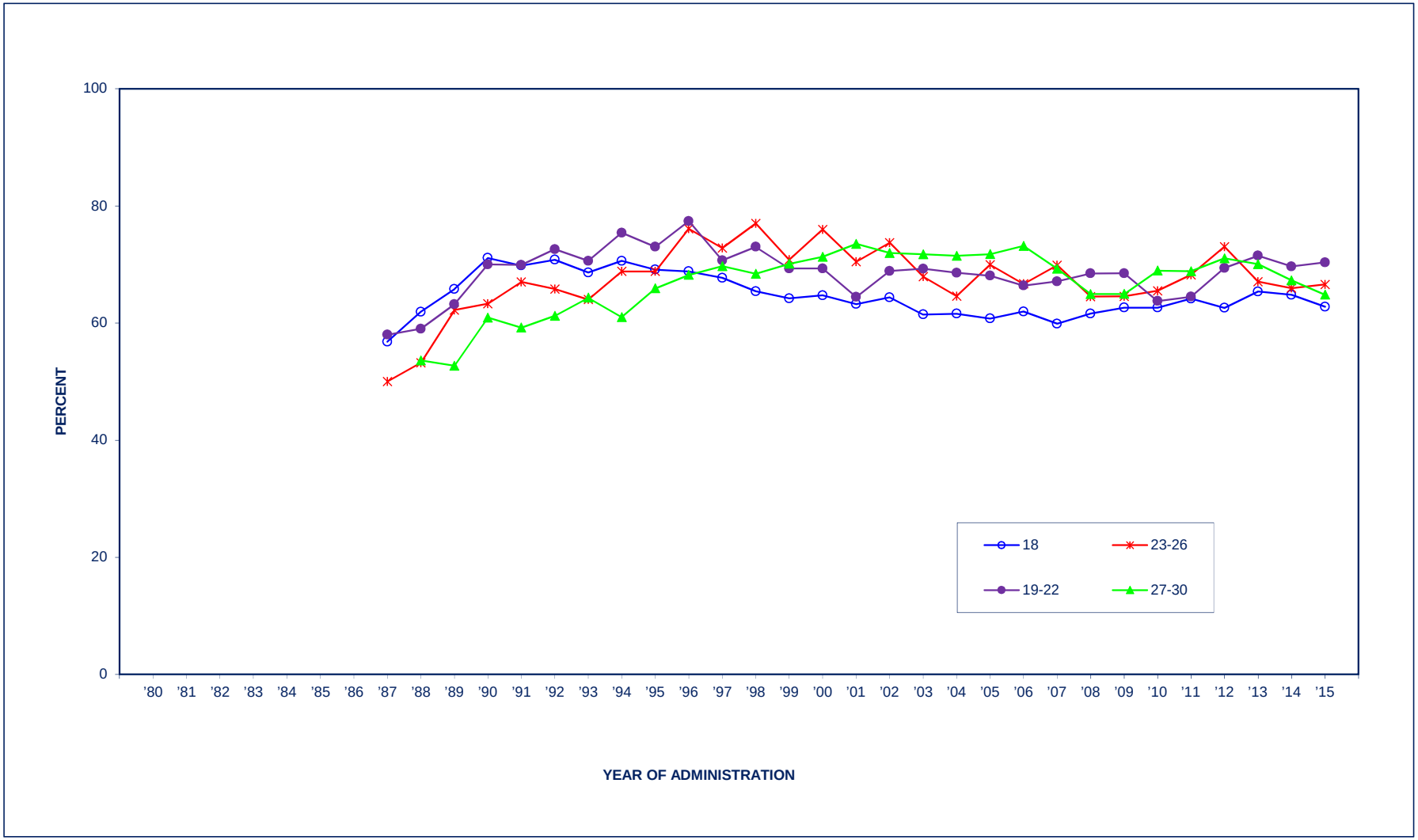
Source. The Monitoring the Future study, the University of Michigan.

FIGURE 6-15
Trends in Harmfulness of COCAINE POWDER Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30
Trying Once or Twice



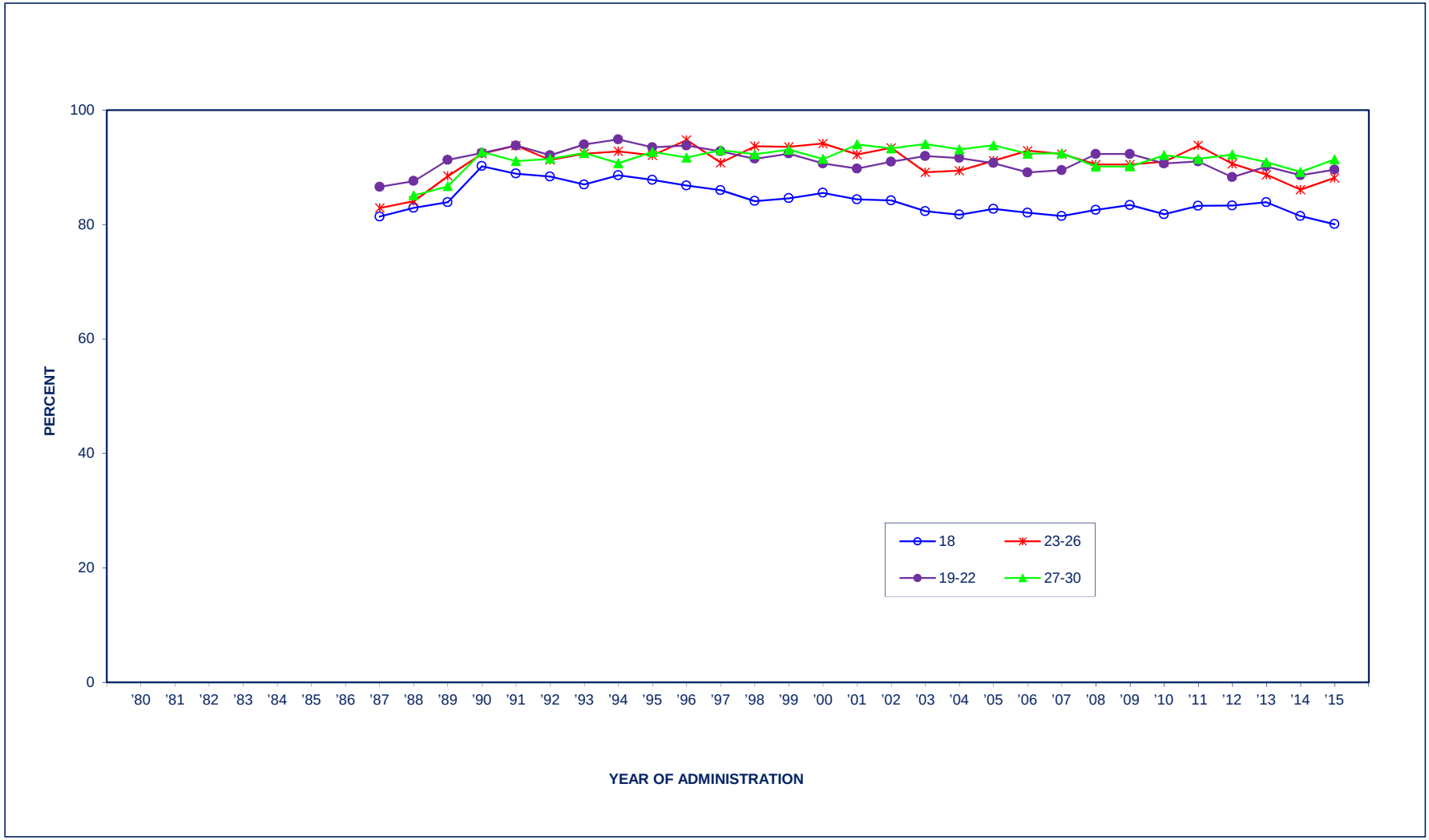
Source. The Monitoring the Future study, the University of Michigan.

FIGURE 6-16
Trends in Harmfulness of COCAINE POWDER Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30
Occasional Use



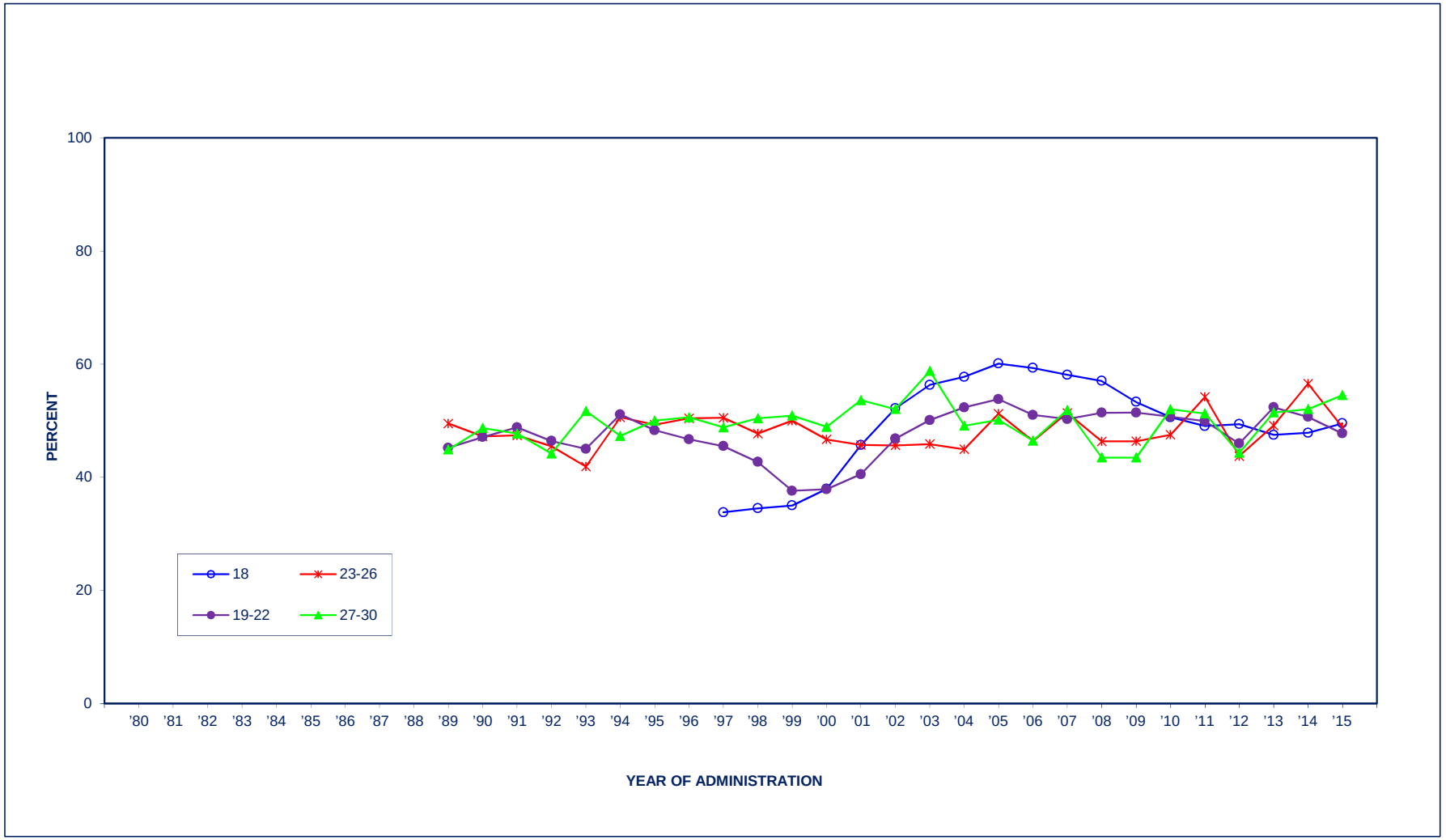
Source. The Monitoring the Future study, the University of Michigan.

FIGURE 6-17
Trends in Harmfulness of COCAINE POWDER Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30
Regular Use



Source. The Monitoring the Future study, the University of Michigan.

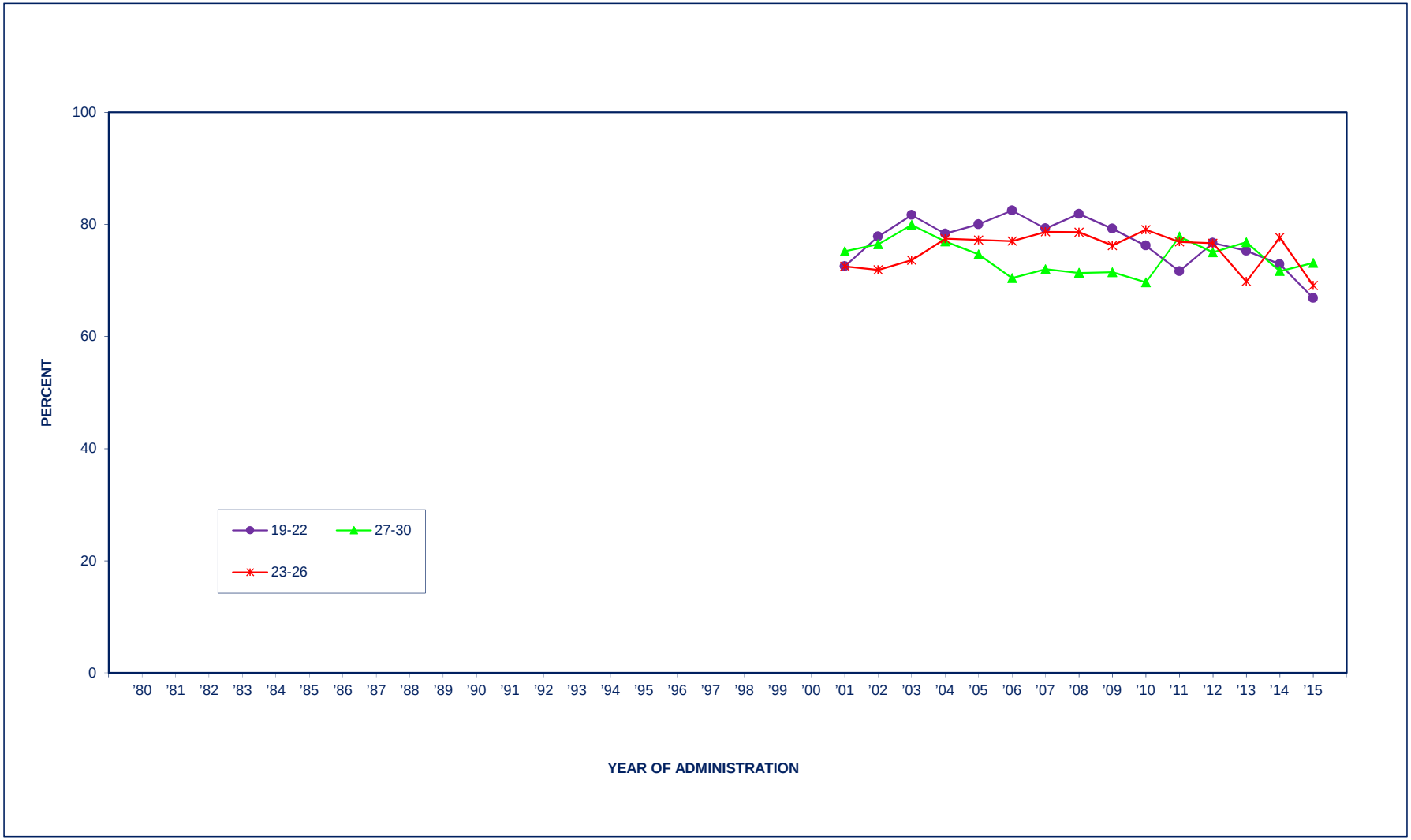
FIGURE 6-18
Trends in Harmfulness of ECSTASY (MDMA)[a] Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30
Trying Once or Twice



Source. The Monitoring the Future study, the University of Michigan.

[a] In 2014 in the Age 18 questionnaire, "molly" was added to the question text. In 2015, the same change was made to the questionnaires for the other age groups. This likely explains the discontinuity in results for the affected years.

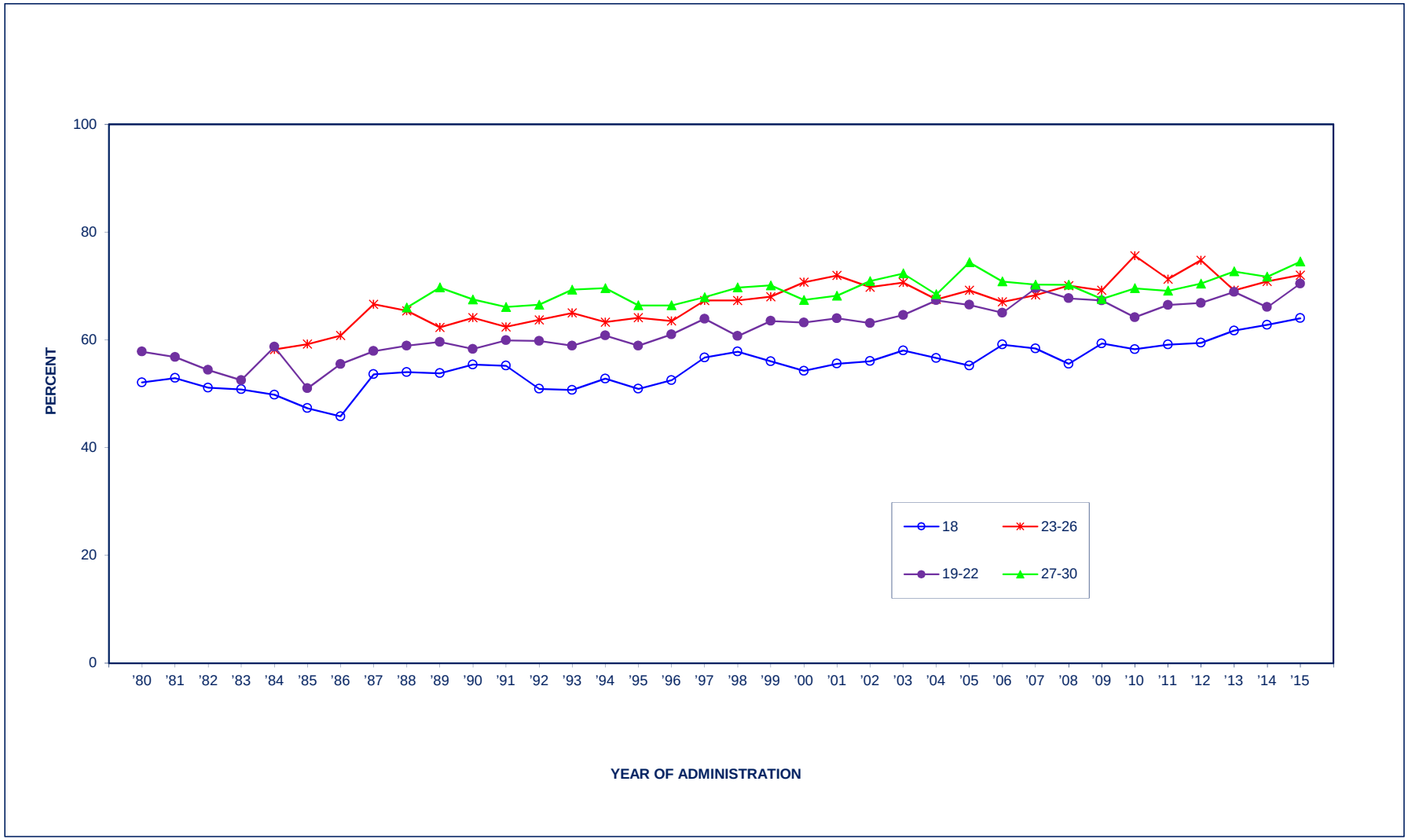
FIGURE 6-19
Trends in Harmfulness of ECSTASY (MDMA)[a] Use as Perceived by Respondents in Modal Age Groups of 19–22, 23–26, and 27–30
Occasional Use



Source. The Monitoring the Future study, the University of Michigan.

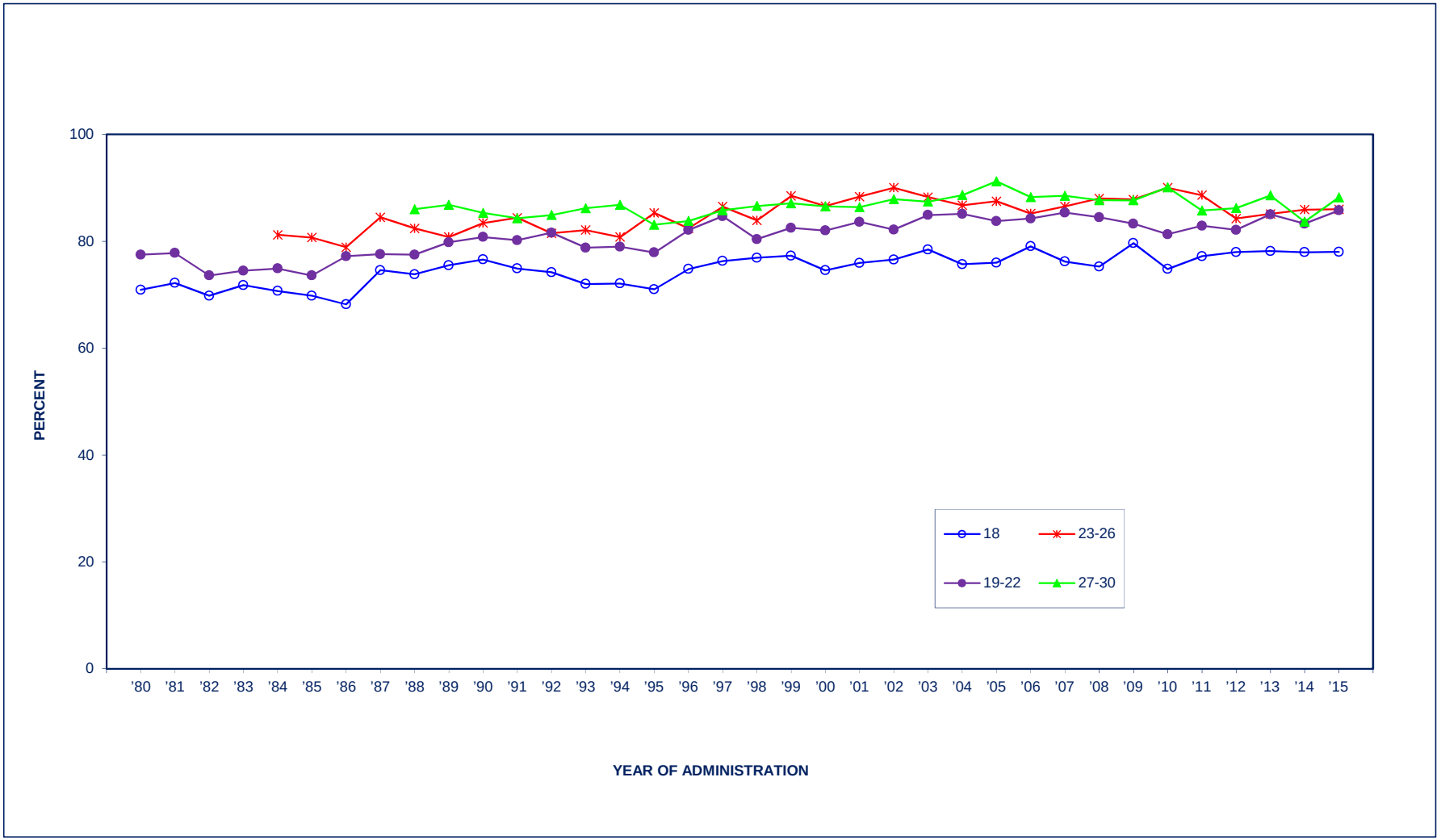
[a] In 2015, "molly" was added to the question text. This likely explains the discontinuity in results for the affected years.

FIGURE 6-20
Trends in Harmfulness of HEROIN Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30 Trying Once or Twice



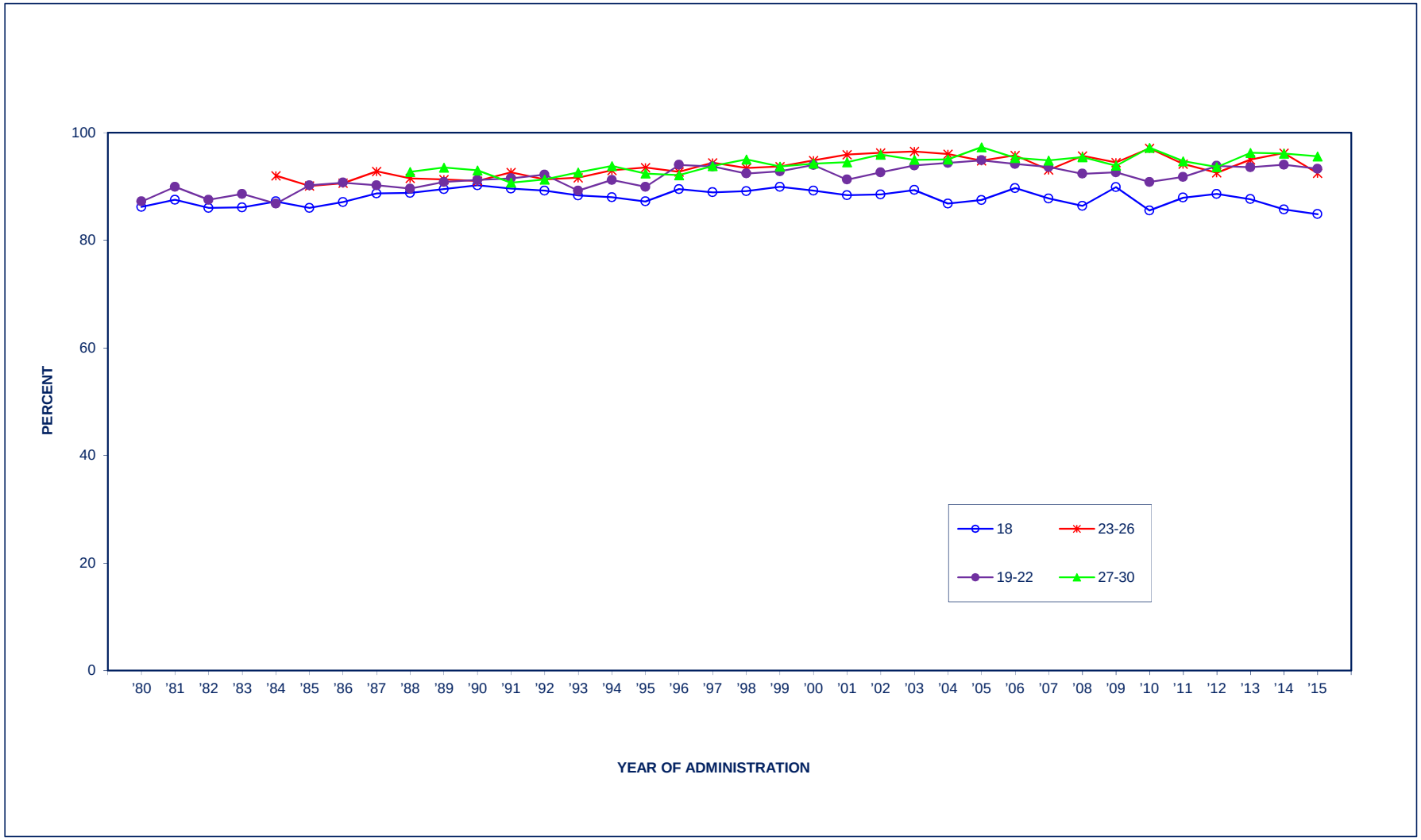
Source. The Monitoring the Future study, the University of Michigan.

FIGURE 6-21
Trends in Harmfulness of HEROIN Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30
Occasional Use



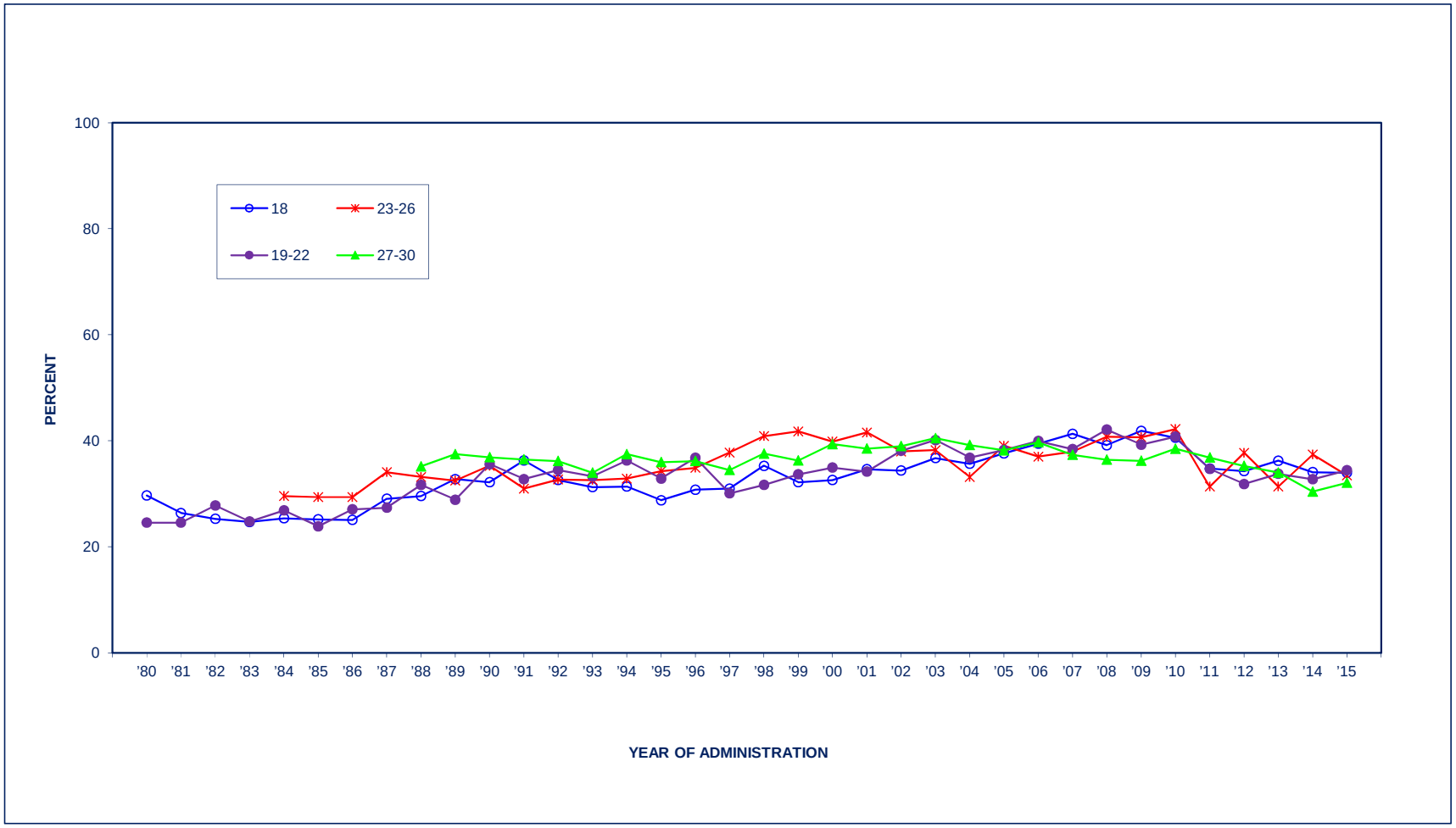
Source. The Monitoring the Future study, the University of Michigan.

FIGURE 6-22
Trends in Harmfulness of HEROIN Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30
Regular Use



Source. The Monitoring the Future study, the University of Michigan.

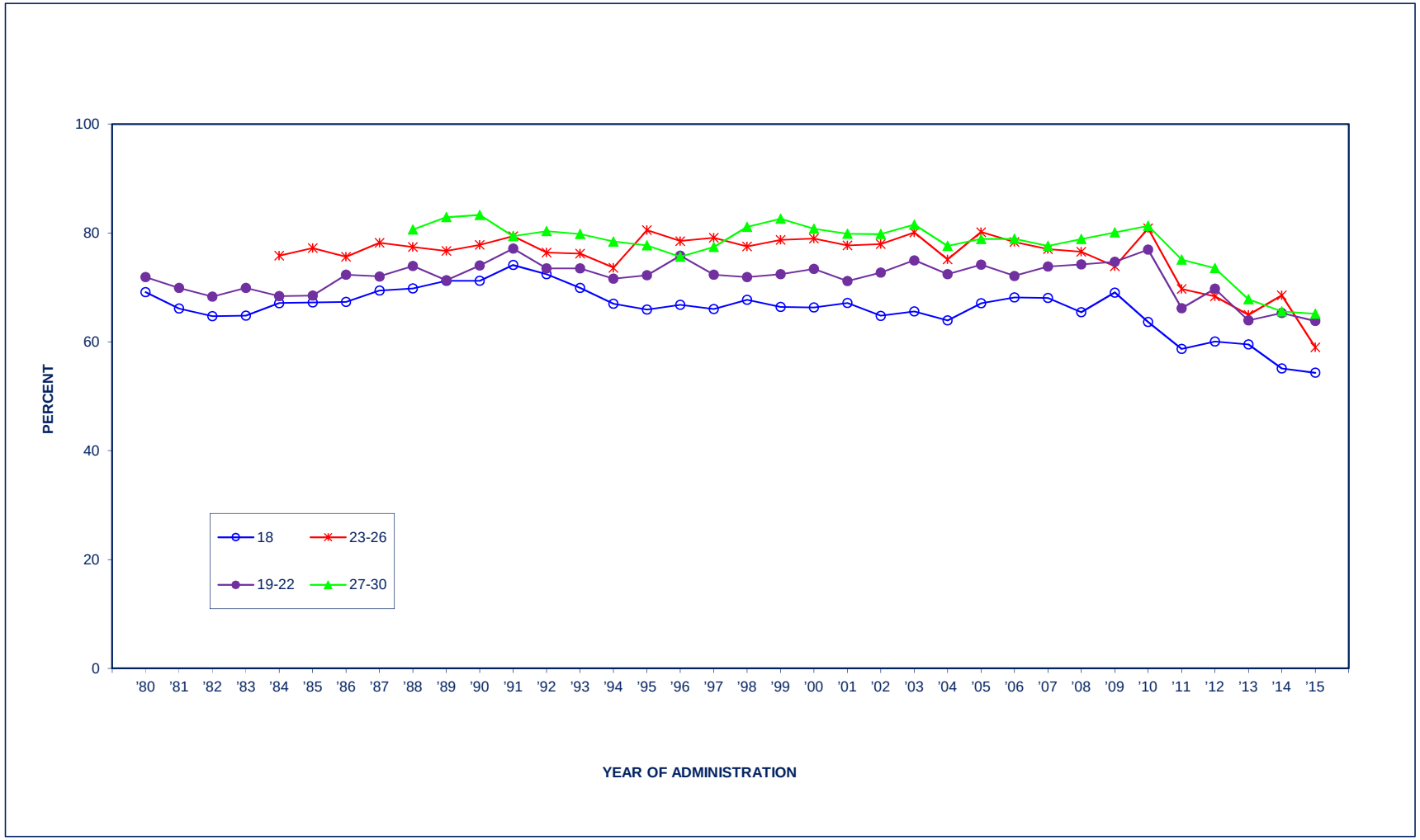
FIGURE 6-23
Trends in Harmfulness of AMPHETAMINE[a] Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30 Trying Once or Twice



Source. The Monitoring the Future study, the University of Michigan.

[a]In 2011 the list of examples was changed from upper, pep pills, bennies, and speed to uppers, speed, Adderall, Ritalin, etc. These changes likely explain the discontinuity in the 2011 results.

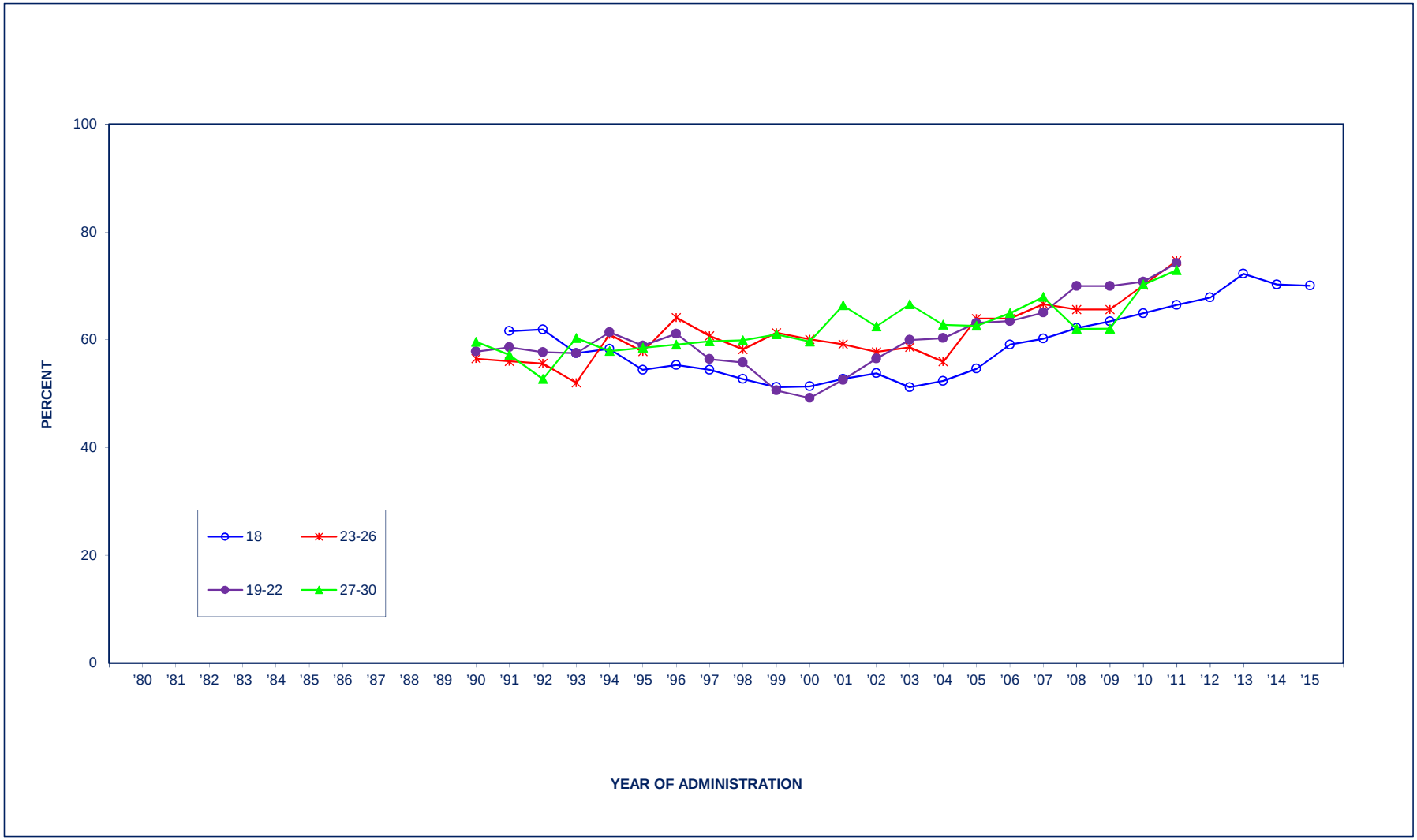
FIGURE 6-24
Trends in Harmfulness of AMPHETAMINE[a] Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30
Regular Use



Source. The Monitoring the Future study, the University of Michigan.

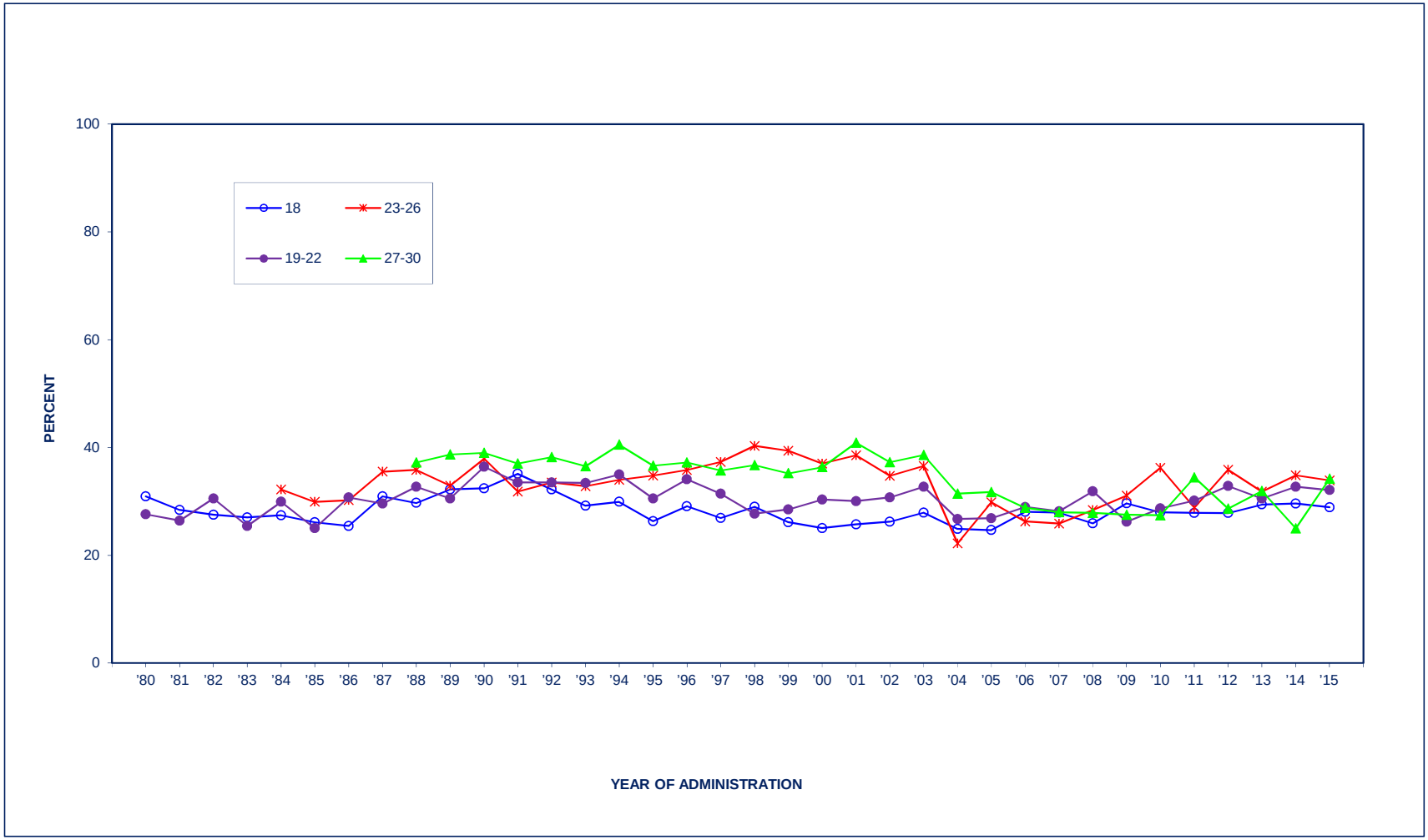
[a]In 2011 the list of examples was changed from upper, pep pills, bennies, and speed to uppers, speed, Adderall, Ritalin, etc. These changes likely explain the discontinuity in the 2011 results.

FIGURE 6-25
Trends in Harmfulness of CRYSTAL METHAMPHETAMINE (ICE) Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30
Trying Once or Twice



Source. The Monitoring the Future study, the University of Michigan.

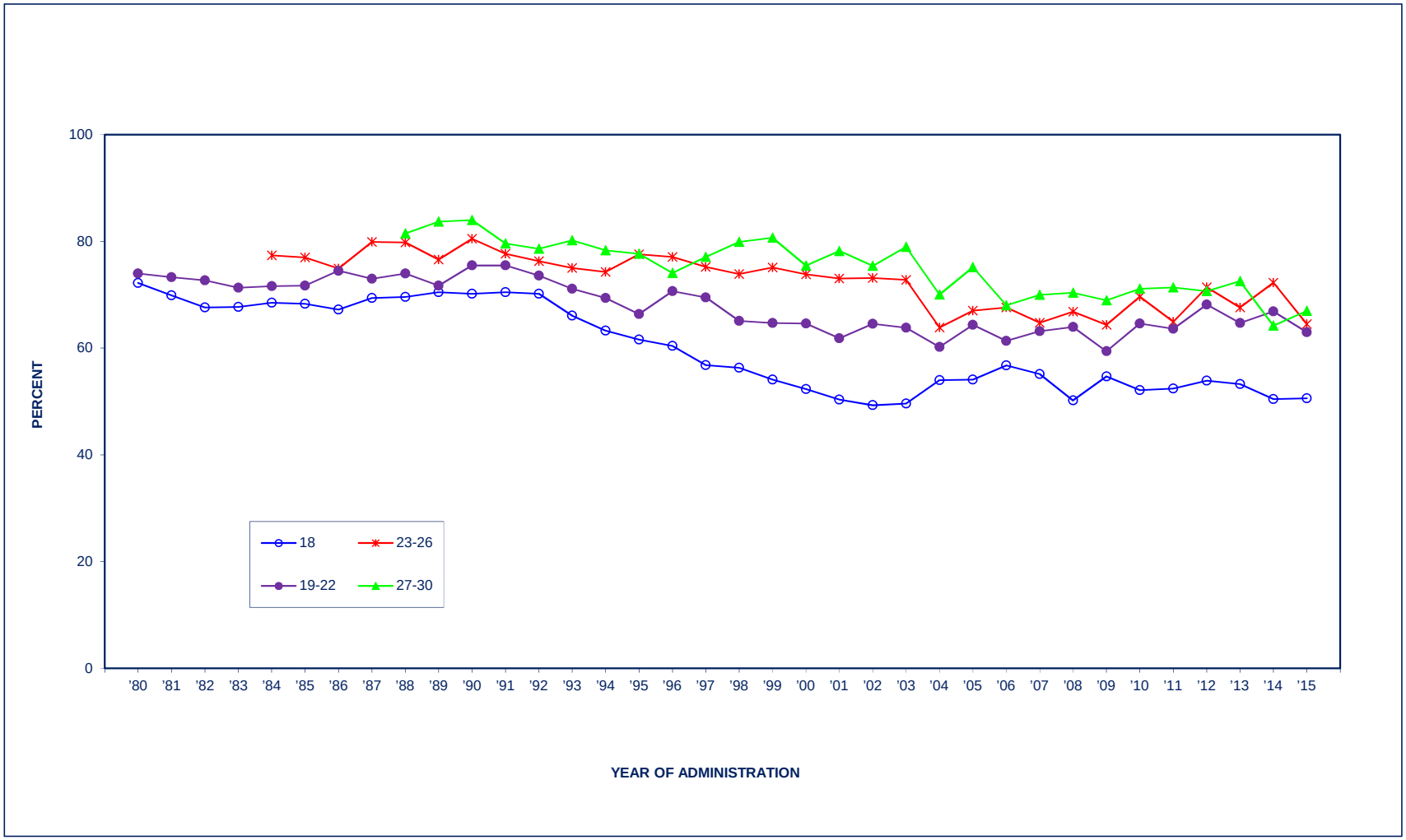
FIGURE 6-26
Trends in Harmfulness of SEDATIVE (BARBITURATE)[a] Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30
Trying Once or Twice



Source. The Monitoring the Future study, the University of Michigan.

[a]In 2004 the question text was changed from barbiturates to sedatives/barbiturates and the list of examples was changed from downers, goofballs, reds, yellows, etc. to just downers. These changes likely explain the discontinuity in the 2003 and 2004 results.

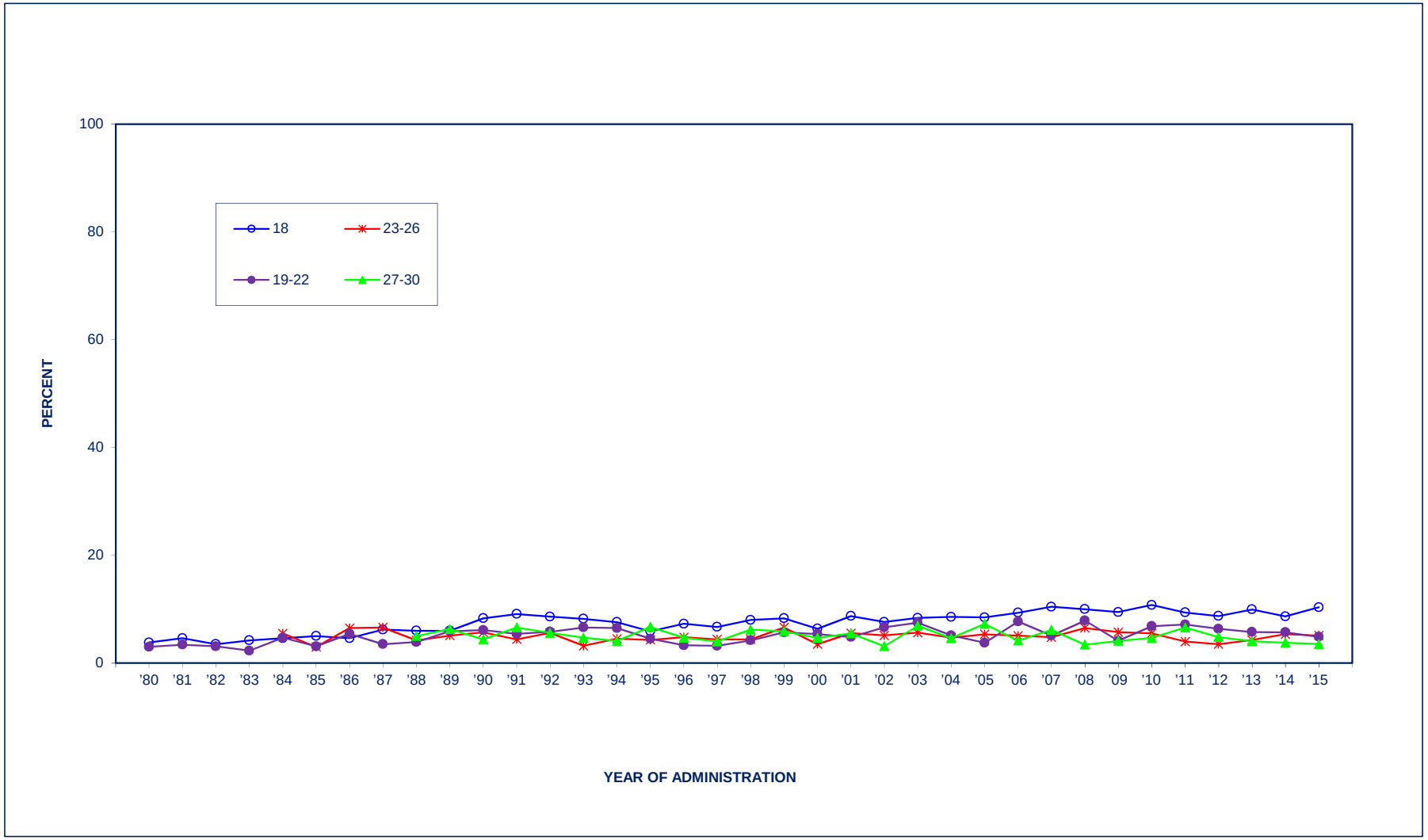
FIGURE 6-27
Trends in Harmfulness of SEDATIVE (BARBITURATE)[a] Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30
Regular Use



Source. The Monitoring the Future study, the University of Michigan.

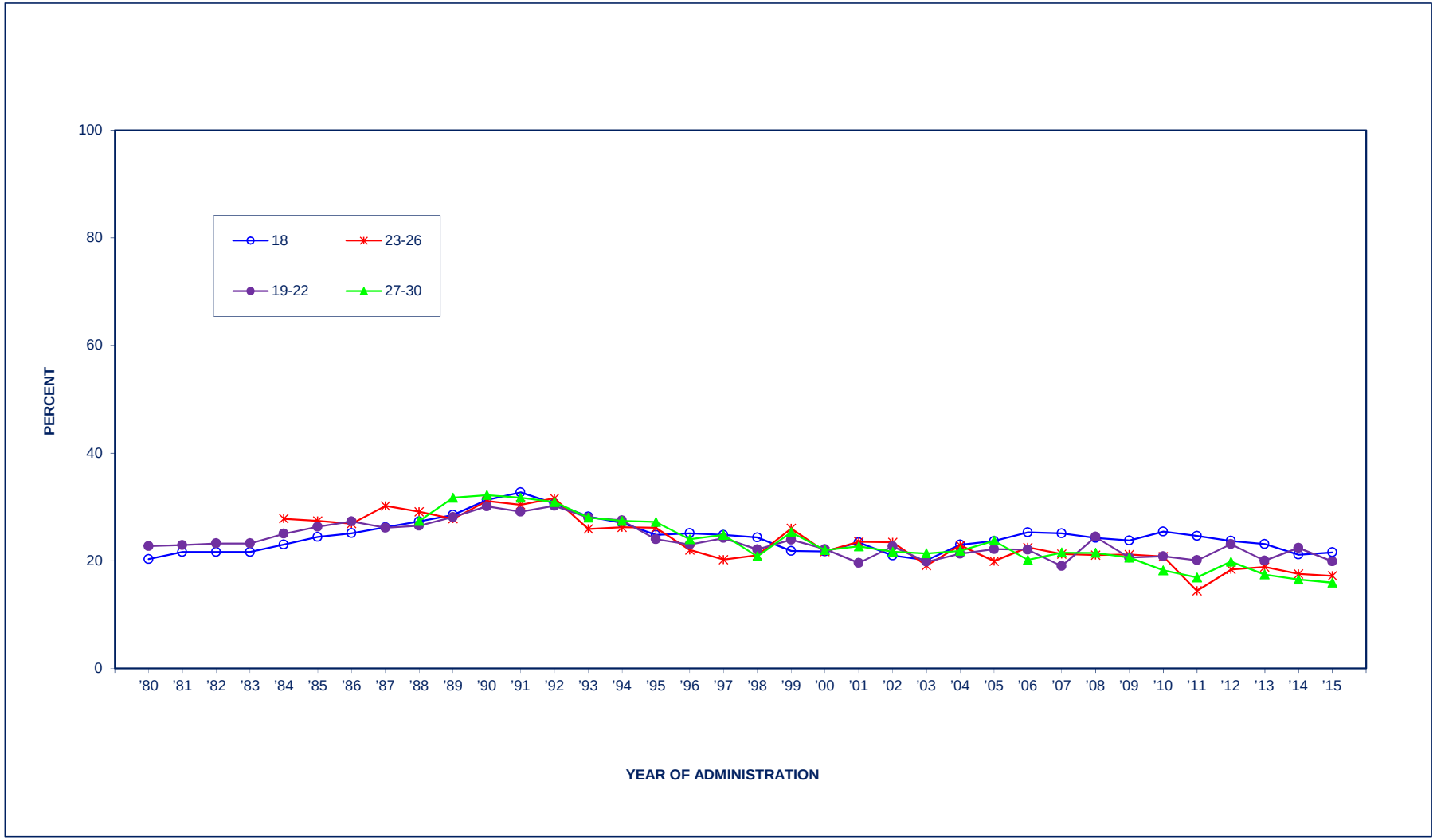
[a]In 2004 the question text was changed from barbiturates to sedatives/barbiturates and the list of examples was changed from downers, goofballs, reds, yellows, etc. to just downers. These changes likely explain the discontinuity in the 2003 and 2004 results.

FIGURE 6-28
Trends in Harmfulness of ALCOHOL Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30 Trying Once or Twice



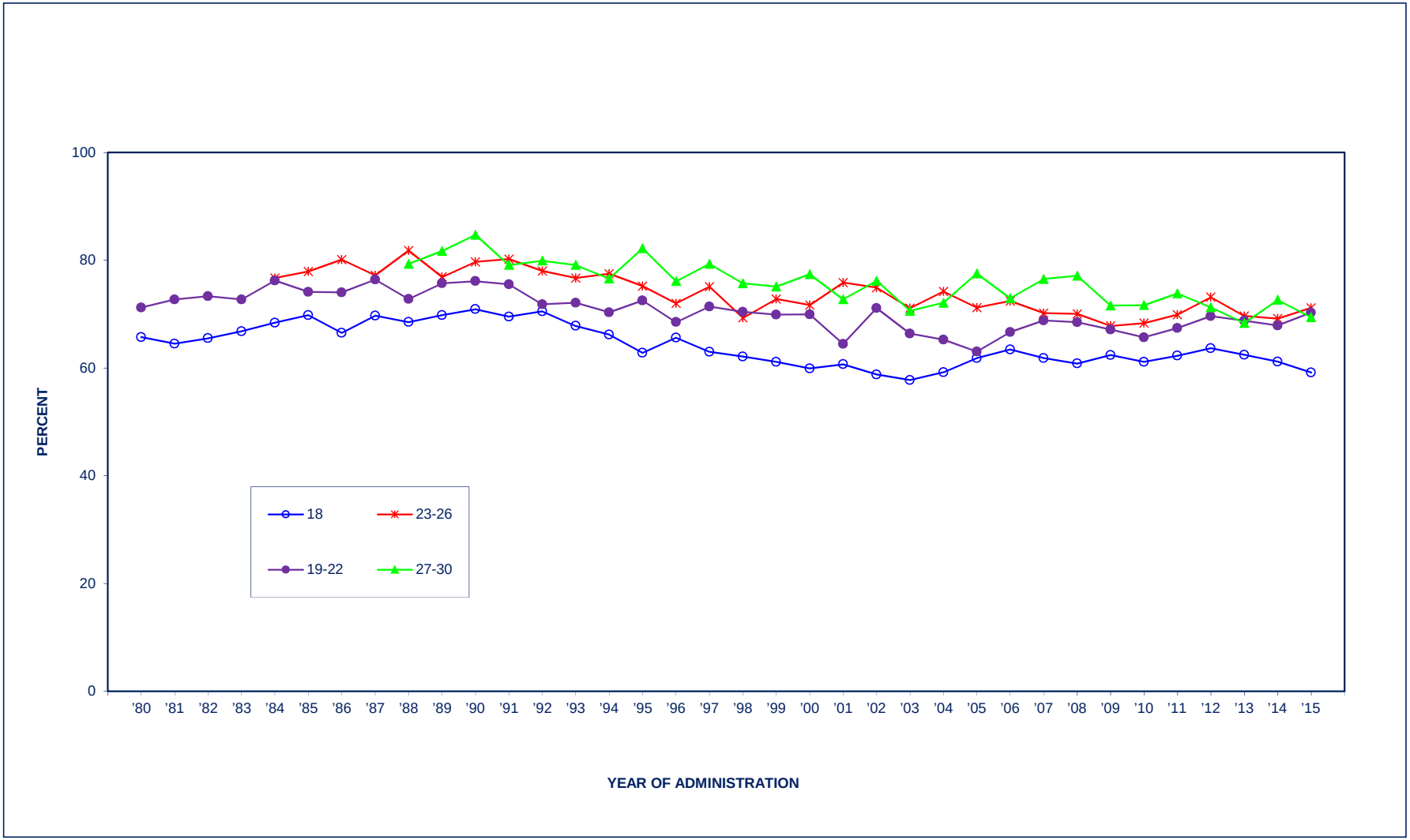
Source. The Monitoring the Future study, the University of Michigan.

FIGURE 6-29
Trends in Harmfulness of ALCOHOL Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30 Having One or Two Drinks per Day



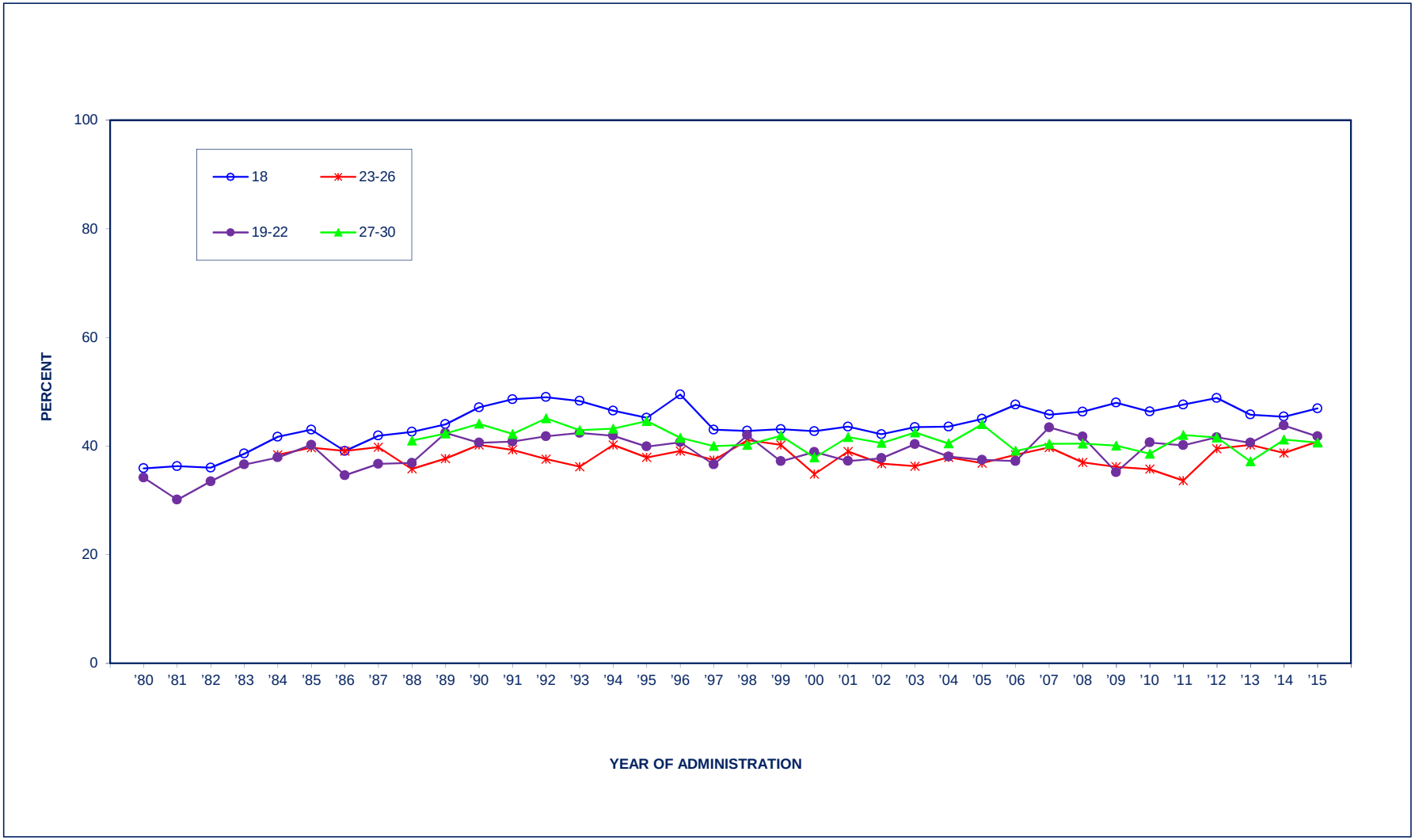
Source. The Monitoring the Future study, the University of Michigan.

FIGURE 6-30
Trends in Harmfulness of ALCOHOL Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30 Having Four or Five Drinks per Day



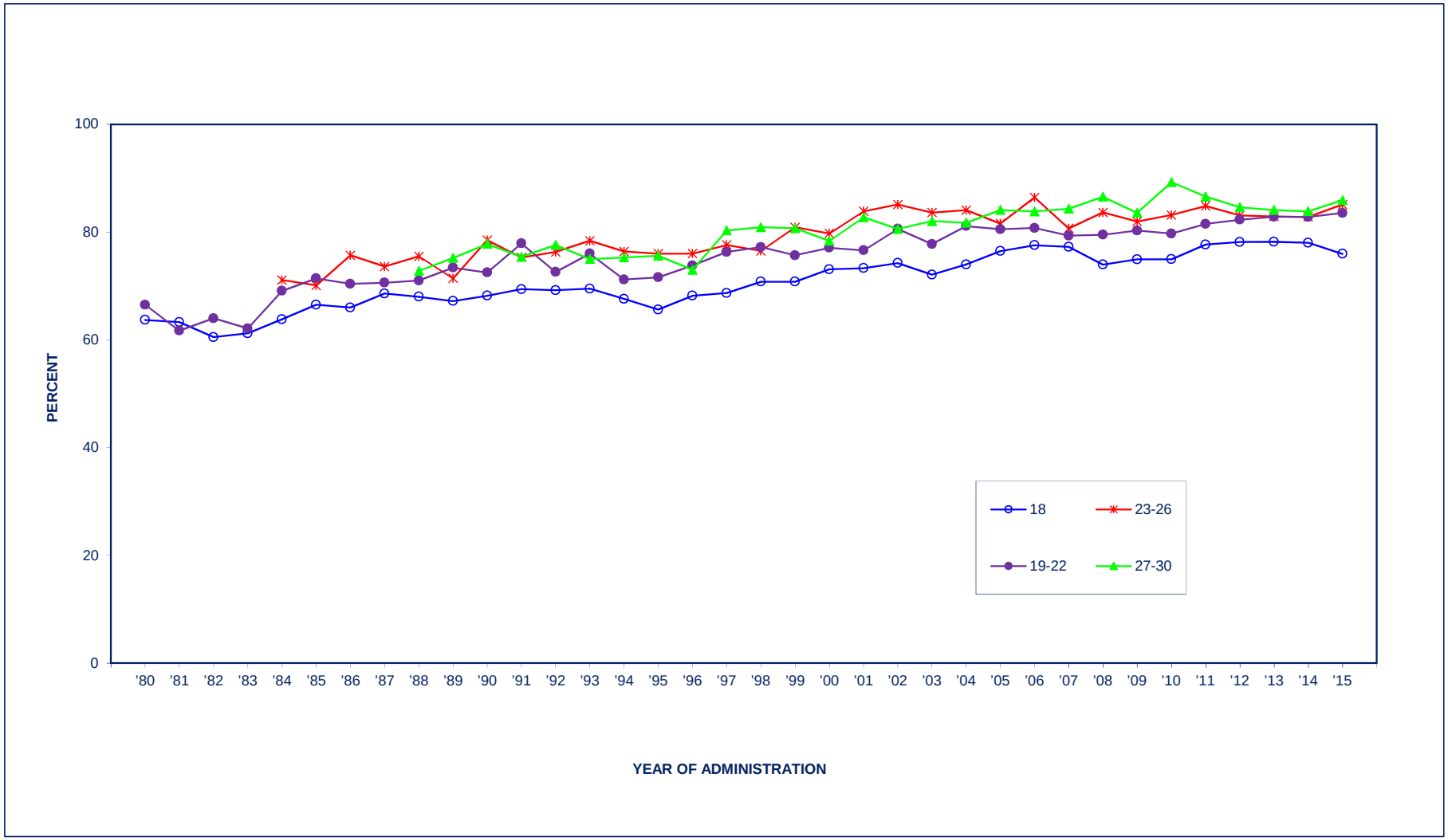
Source. The Monitoring the Future study, the University of Michigan.

FIGURE 6-31
Trends in Harmfulness of BINGE DRINKING as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30 Having Five or More Drinks Once or Twice Each Weekend



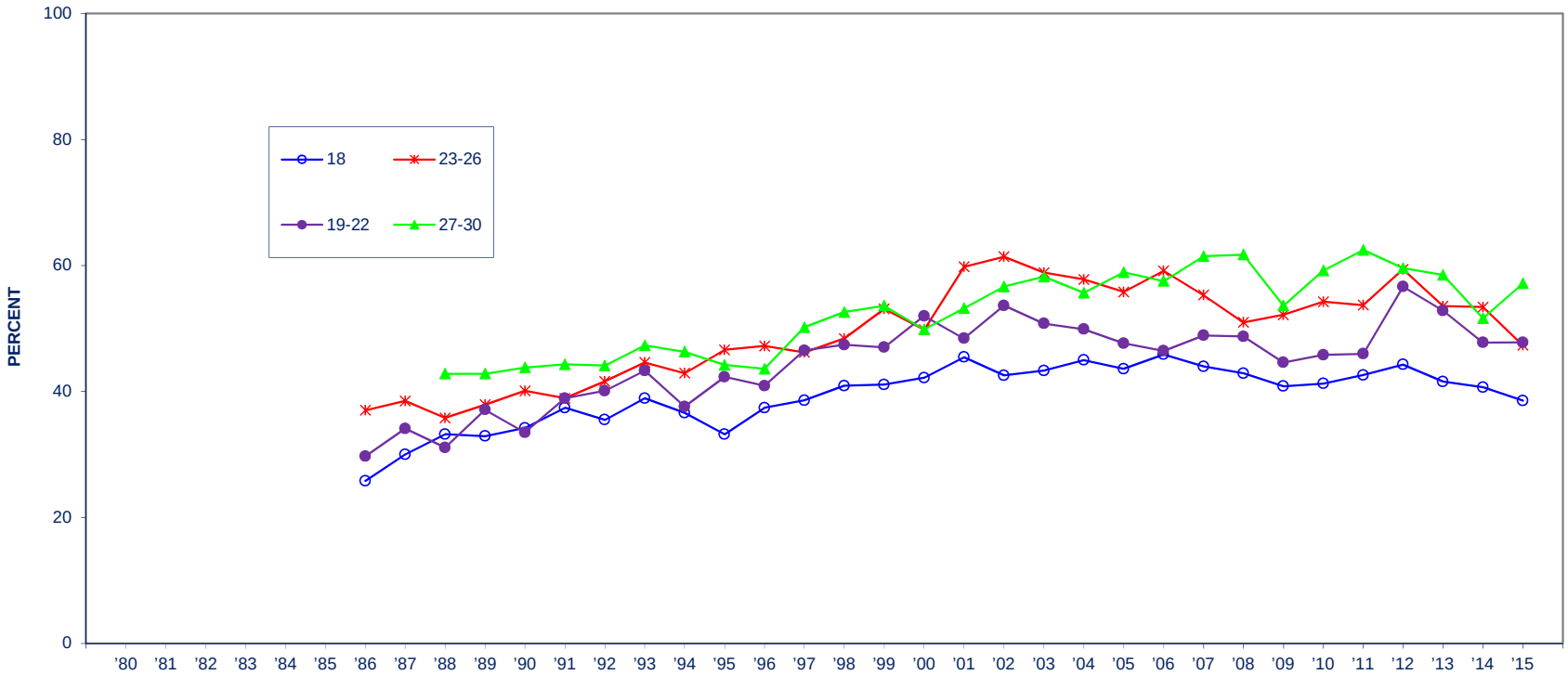
Source. The Monitoring the Future study, the University of Michigan.

FIGURE 6-32
Trends in Harmfulness of TOBACCO Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30
Smoking One or More Packs of Cigarettes per Day



Source. The Monitoring the Future study, the University of Michigan.

FIGURE 6-33
Trends in Harmfulness of SMOKELESS TOBACCO Use as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30
Regular Use



Source. The Monitoring the Future study, the University of Michigan.

Chapter 7

THE SOCIAL CONTEXT

The social contexts in which individuals place and otherwise find themselves can influence the likelihood of using drugs in a number of ways. The context can provide social modeling and social norms for either use or abstention from use. Through friends and friends' contacts it can also influence the availability of drugs and bring about an awareness of new drugs, including knowledge of their existence and potential for altering mood and consciousness. Since its inception, MTF has measured three important features of the social context: (1) peer groups' norms about drug use, (2) amount of direct exposure to drug use by friends and others, and (3) perceived availability of drugs. All three factors are measured by self-reports and are therefore measures of the perceived context, though evidence suggests that they bear a strong correlation with the actual context. We believe that these three factors exert important influences on substance use at both the individual (micro) and the aggregate (macro) level.

In *Volume I*, we examined these factors among secondary school students. In this chapter, we do the same for the young adult population ages 19 to 30, whose social contexts typically differ considerably from what they were in high school. Most high school graduates today enter college, many get civilian jobs, and some enter military service. These transitions almost always change the institutional contexts experienced by young adults (e.g., colleges, work organizations, military services, etc.) and therefore the circles of people to whom they are exposed and with whom they develop friendships. They also alter the potential consequences of drug use if it is discovered by authorities in the relevant institution; for example, consequences can be quite severe for those in military service, and we have shown that illicit drug use drops when young people enter the military.[1]

Each of the question sets discussed here are contained in only one of the six questionnaire forms, so the case counts are lower than those presented in most chapters in this volume. (Also, in comparison to the secondary school samples covered in *Volume I*, follow-up samples reported here are much smaller.) Therefore, the prevalence and trend estimates are more subject to random fluctuation or "noise."

In addition, we include consideration of norms, exposure, and availability where relevant among those age 35 and older. In such cases, the data are based on the one form that is used for all respondents at a particular age.

PEER NORMS AMONG YOUNG ADULTS (AGES 18–30)

Table 7-1 provides current levels and trends in perceived friends' disapproval of drug use as reported by 12th graders, 19- to 22-year-olds, 23- to 26-year-olds, and 27- to 30-year-olds. (These are the same age groupings used in Chapter 6.) Trend data are available since 1980, 1984, and 1988, respectively, for these three 4-year age groupings of young adults.

[1]Bachman, J. G., Freedman-Doan, P., O'Malley, P. M., Johnston, L. D., & Segal, D. R. (1999). Changing patterns of drug use among U.S. military recruits before and after enlistment. *American Journal of Public Health, 89*, 672-677. doi:10.2105/AJPH.89.5.672

The results for perceived peer norms are generally quite consistent with those for personal disapproval in the aggregate.[2] Exceptions are trying marijuana once or twice and smoking one or more packs of cigarettes per day, for which friends' attitudes are consistently reported as more disapproving than respondents' own attitudes (especially in the oldest age band), and heavy weekend drinking, for which friends' attitudes are seen as less disapproving than their own. The question set regarding friends' disapproval employs a shorter list of drug-using behaviors but includes the same answer scale, stated in terms of strength of disapproval associated with different use levels of the various drugs, as do the questions on the respondent's own attitudes about those behaviors (discussed in Chapter 6). While peer disapproval and personal disapproval questions appear on different questionnaire forms and therefore have different sets of respondents, the forms are distributed randomly in respondents' senior year of high school and should leave no systematic sample differences.

Perceptions of Close Friends' Attitudes (Ages 18 to 30)

Table 7-1 provides trends for each age band in the proportions of respondents indicating how their close friends would feel about the respondent engaging in various drug-using behaviors. For purposes of simplification, we begin by addressing results across the entire 19- to 30-year age band (tabular data for the entire age band are not presented). Then we distinguish among the three young adult age bands: 19–22, 23–26, and 27–30, along with 18-year-olds. In 2010 questions about friends' disapproval were dropped from the young adult follow-up questionnaires for all drugs except ***marijuana***, ***occasions of heavy drinking***, and ***cigarettes***. The dropped questions had shown a high degree of redundancy with respondents' reports of their own attitudes in the aggregate, and thus were deleted to make room for other items.

- Generally, the peer norms reported by young adults one to 12 years past high school have been quite similar to those reported by 12th graders.

- With regard to ***marijuana***, nearly half of young adults (45%) thought their close friends would disapprove of their trying it, while over half (56%) thought their close friends would disapprove of occasional use, and about three fourths (74%) thought close friends would disapprove of regular use. Clearly the norms differ as a function of level of marijuana use, but for all levels of use they tend to be fairly restrictive for a good portion of young adults.

- For each of the ***illicit drugs other than marijuana***, 2009 was the last year in which results on peer norms were available. At that time, the great majority of young adults said that their close friends would disapprove of their even *trying* such drugs once or twice; 89% indicated this for ***cocaine***, 87% for ***LSD***, and 87% for ***amphetamines***. (We stopped asking these questions beginning in 2010 to make space for new items on the survey and because the data that they provided on peer norms so closely tracked what their own attitudes were in the aggregate.)

- In 2009 nearly two thirds (63%) of young adults said their close friends would disapprove if they were ***daily drinkers***, and 9 out of 10 (91%) thought friends would disapprove if they had ***four or five drinks nearly every day***.

[2] The question reads, "How do you think your close friends feel (or would feel) about you… [smoking marijuana once or twice]?" The answer categories are "don't disapprove," "disapprove," and "strongly disapprove." Percentages discussed are for the last two categories combined.

- Friends' disapproval of ***heavy drinking on weekends*** continues to be measured and is distinctly lower than disapproval of daily drinking. In 2015, 50% to 53% of any of the young adult age groups thought that their close friends would disapprove of their having five or more drinks once or twice each weekend. These levels of disapproval are considerably lower than among 18-year-olds (69%).

- Peer disapproval of ***cigarette*** smoking is very high in all four age bands: In 2015, 85% of 12th graders said their friends would disapprove of pack-a-day smoking, as did 89% to 92% of 19- to 30-year-olds.

Trends in Peer Norms (Ages 18 to 30)

Important changes in the social acceptability of drug-using behaviors among both 12th graders' and young adults' peers have occurred since MTF began (see Table 7-1).

- Among 12th graders, the proportion saying their close friends would disapprove of their *trying* ***marijuana*** rose from 41% in 1979 to 73% in 1992—a period of substantial decline in use. Friends' disapproval also grew substantially stronger in all of the young adult age bands in the years for which data are available. For example, among 19- to 22-year-olds, the proportion thinking their close friends would disapprove if they even tried marijuana rose from 41% in 1981 to 65% in 1992 (Table 7-1). A similar peak in disapproval occurred for 23- to 26-year-olds in 1992 and 1993, and among 27- to 30-year-olds in 1994 and 1995—66% for both age bands. In all age groups, peer disapproval subsequently declined, though the declines were earliest and greatest among 12th graders. The decline ended in 1997 for 12th graders and began to reverse, but continued through 2002 among 19- to 26-year-olds. There was little systematic change for several years among 19- to 26-year-olds, but more recently—since about 2008—their friends' disapproval declined appreciably for all three levels of marijuana use. In 2013 all young adult age groups showed a further decline in disapproval of marijuana use; indeed, the declines for the older two age bands were large and statistically significant. For example, the percent of 23- to 26-year-olds and 27- to 30-year-olds saying that their close friends would disapprove of their trying marijuana fell by about 9 percentage points in that one year, possibly reflecting both cohort effects and a secular trend. At this point only about half of each age group say that their close friends would disapprove of their trying marijuana, down from between 57–62% as recently as 2008. *Clearly peer norms among young adults, as well as teens, have become more accepting of marijuana use in recent years.* Disapproval rates declined in 2015 in all three young adult age bands (but not among the 12th graders).

 Close friends' disapproval of more frequent marijuana use also rose until the early 1990s among 18-year-olds, and then declined between 1992 and 1997. It declined through 1999 among 19- to 22-year-olds and continued to decline among 23- to 30-year-olds through 2003. Recent peak years of friends' disapproval of trying marijuana were 2006 for 12th graders, 2008 for 19- to 26-year-olds, and 2010 for 27- to 30-year-olds. In essence, peer norms have moved in a way consistent with the existence of some lasting cohort differences in these norms, as well as in use. A more formal analysis of age, period, and cohort effects

in disapproval came to the same conclusion.[3] In 2013 there were continuing declines in friends' disapproval of occasional and regular use among 23- to 30-year-olds, no further consistent changes in 2014, and a resumption of declines in 2015.

- There was a gradual increase in peer disapproval of *trying* an ***amphetamine*** for all age groups (18–30) through 1991, followed by a small decline evident among 12th graders through 1997. Between 1997 and 2009—the last year we asked this question of young adults and for which data are available—levels of disapproval among 18- to 30-year-olds increased to some extent, though not dramatically. In 2009, disapproval levels for trying an amphetamine were at 87% for all four age groups. Based on the data available on trends in respondents' own disapproval (see Chapter 6), it seems likely that peer disapproval among young adults has weakened in recent years.

- Perceived peer norms for ***LSD*** were measured from 1980 through 2009 among the follow-up respondents. Through 1991, peer disapproval of trying LSD showed very little change in any of the age bands, but it fell some in the 1990s, especially among 18-year-olds and subsequently among 19- to 22-year-olds. These declines bottomed out in a staggered fashion, beginning with the 12th graders in 1997, which thereafter showed a seven-percentage-point increase in peer disapproval. There was a five-percentage-point increase among 19- to 22-year-olds (after 2000), and a three-percentage-point increase among 23- to 26-year-olds (after 2001)—again suggestive of a cohort effect in these norms. In 2009, the last year we asked, there was almost no difference among the age groups, with 85% to 87% of respondents in each age group saying their friends would disapprove of their trying LSD.

- Perceived peer norms regarding ***cocaine*** use were measured from 1986 through 2009, after which such questions were dropped. In the eight-year interval from 1986 to 1994, self-reported cocaine use declined substantially as peer norms in all age bands shifted toward disapproval. For example, by 1994, 95% of the 19- to 22-year-olds thought their close friends would disapprove of their trying cocaine once or twice. After 1994, peer norms against use continued to strengthen a bit in the upper age bands, perhaps through generational replacement, but weakened slightly in the younger age bands, likely reflecting a new cohort effect. By 2009 (the last year we asked) there was little difference by age in peer norms against cocaine use, with 85% to 91% saying their friends would disapprove of their even trying it. By way of contrast, in 1986 that statistic ranged between 71% and 80% among 18- to 26-year-olds.

- Peer norms against ***occasions of heavy drinking*** on weekends (five or more drinks once or twice each weekend) among the three young adult age groups have tended to be weakest for the 19- to 22-year-old age group, in which such behavior is most common, and strongest for the 27- to 30-year-old group. Since 2002, disapproval of such drinking has also been low for the 23- to 26-year-old group relative to the other two age bands. Among 12th graders, friends' attitudes had become somewhat more restrictive between 1981 and 1992 (and respondents' own occasions of heavy drinking declined during that interval), but

[3]Keyes, K. M., Schulenberg, J. E., O'Malley, P. M., Johnston, L. D., Bachman, J. G., Li, G., & Hasin, D. (2011). The social norms of birth cohorts and adolescent marijuana use in the United States, 1976-2007. *Addiction, 106*(10), 1790-1800. doi: 10.1111/j.1360-0443.2011.03485.x

attitudes were fairly level for some years (before rising from 56% in 2002 to 66% by 2014). There was a similar upward trend in peer disapproval among the various young adult age bands that followed a staggered pattern, again likely reflecting a cohort effect in these norms. However, between 1997 and 2000 the 19- to 22-year-old age group became somewhat less disapproving of occasions of heavy drinking on weekends; this was followed by a decline in perceived peer disapproval between 2001 and 2004 among 23- to 26-year-olds, and a decline from 2004 to 2009 among 27- to 30-year-olds. Despite some increases in peer disapproval over the years, this rather extreme form of drinking has the *least* restrictive perceived peer norms of all of the substance-using behaviors measured in MTF, yet about half still report peer disapproval. The subsequent increase in peer disapproval among 12th graders was not mirrored among the older age strata; thus peer disapproval of binge drinking became highest among the 12th graders, contrary to the situation in the late 1990s. In 2015 the proportions saying that their friends would disapprove of such heavy weekend drinking was between 50% and 53% for the three young adult age bands compared to 69% among the 12th graders.

- Peer norms against ***cigarette smoking*** one or more packs per day have strengthened in staggered fashion among 18-year-olds and the young adult age groups in recent years. Between 1998 and 2008, the proportion saying that their close friends would disapprove of their smoking a pack or more of cigarettes per day rose from 69% to 83% among 18-year-olds and from 69% to 86% among 19- to 22-year-olds. The two older strata did not see a comparable change until peer disapproval among 23- to 26-year-olds rose from 77% in 2005 to 88% in 2009, at which time their disapproval leveled. The change did not manifest itself among the 27- to 30-year-olds until 2010; their rates of peer disapproval of smoking, which for some years had the highest rates of disapproval for smoking among the four age groups, stayed fairly level after 2000, until there was a 4.4-percentage-point jump in 2010, followed by a leveling. This pattern again suggests some cohort effects in peer norms working their way up the age spectrum. In 2015, very large proportions across the age bands reported that their friends would disapprove of pack-a-day smoking, ranging from 85% among 18-year-olds to 92% among those 27–30 years old.

 In the early years of MTF, peer disapproval of smoking a pack or more of cigarettes per day rose among 12th graders from 64% (1975) to 73% (1979). There was little further net change for 13 years through 1992, when friends' disapproval stood at 76%. During the relapse in the drug epidemic between 1992/1993 and 1997/1998, all age groups showed a decrease in perceived peer disapproval of smoking—consistent with a secular trend.

ADULTS' EXPOSURE TO DRUG USE THROUGH FRIENDS AND OTHERS (AGES 18–55)

Exposure to drug use is important because it provides both the modeling of the behavior by peers (possibly including direct encouragement to use) and immediate access. Exposure is measured by two sets of questions, each appearing on a (different) single questionnaire form. The first set asks the respondent to estimate what proportion of his or her friends use each drug, while the second set asks, "During the LAST TWELVE MONTHS how often were you around people who were using each of the following to get high?" The same questions are asked of 12th graders, and their results are included here for comparison purposes in Tables 7-2 and 7-3 and Figures 7-1 through

7-24. (Questions about direct exposure to drug use were not included in the questionnaires for 35- to 55-year-olds due to the space limitations imposed by the use of a single questionnaire form at each of these ages.) We continue to deal with four-year age bands for the friends' use measures in order to increase the reliability of the estimates. Ages 35, 40, 45, 50, and 55 are shown as one-year age bands, with both half-samples from each of those cohorts being surveyed at those modal ages. Starting with age 35, each year has a larger number of cases than single years at the earlier ages because *all* respondents in a cohort at later ages complete the relevant questionnaire items, compared with only one sixth of those at younger ages. At the end of each table in this chapter is a summary of the weighted number of cases upon which each annual estimate is based. (The actual numbers of cases are somewhat higher.)

Exposure to Drug Use (Ages 18 to 55)

- Relatively high proportions of young adults in all of these age bands have had at least *some* friends who use ***some illicit drug***; that proportion varies considerably with age, with older respondents reporting that fewer friends use (Table 7-2). In 2015, illicit drug use by at least some friends was reported by 81% of 12th graders, 56% of 35-year-olds, 44% of 40-year-olds, 40% of 45-year-olds, 41% of 50-year-olds, and 38% of 55-year-olds.[4] Clearly, the older the respondent, the less likely he or she is to report having friends who use any illicit drugs. The proportions who said that *most or all* of their friends use one or more of the illicit drugs were much lower: 28% for 12th graders, and between 2% and 6% for the 35-, 40-, 45, 50-, and 55-year-olds—quite a dramatic difference across ages and one that is consistent with the large differences in their own self-reported current use.

- With regard to ***illicit drugs other than marijuana***, taken as a whole, considerably fewer respondents reported that *any* of their friends use compared to what is true for marijuana use (see below): 41% for 12th graders, and 19–27% for 35- to 55-year-olds.[5] The proportions who said that *most or all* of their friends use illicit drugs other than marijuana in 2014 were 6% and less than 1%, respectively. Thus, relatively low proportions of the older age groups appear to be deeply immersed in a drug culture involving illicit drugs beyond marijuana.

- With respect to individual illicit drugs, exposure among all of the age groups was greatest for ***marijuana***, with the percentages in 2015 saying they have any friends who use at 77% of the 18-year-olds, down to 32% of 55-year-olds reporting that at least some of their friends use the drug. The next-highest exposures were for ***amphetamines*** (24% among 12th graders, 39% among 19- to 22-year-olds, 29% among 23- to 26-year-olds, and 27% among 27- to 30-year-olds) and ***narcotics other than heroin*** (20% among 12th graders, 22% among19- to 22-year-olds, 24% among 23- to 26-year-olds, and 29% among 27- to 30-year-olds) followed by ***cocaine***, ***hallucinogens other than LSD***, and ***MDMA*** (ecstasy and, more recently, Molly). Because of the dramatic increase in its use during the 1990s and early 2000s, ecstasy surpassed a number of the more traditional drugs, though its use declined sharply in subsequent years. (It should be recalled that use of several illicit drugs

[4] Due to a printing error in the young adult questionnaire in 2015, data cannot be reported for friends' use in the young adult age bands in that one year for this index las well as for some individual drugs that were directly affected. We believe that the 2014 data present a reasonable approximation of what the values likely would be in 2015. This applies to some but not all of the measures of the individual drugs.
[5] Ibid.

was not asked of the age groups above 30 due to space limitations in the single questionnaire form used at each of those ages. See Table 7-2.)

- For the remaining illicit drugs, the proportion of young adults reporting that some friends use a given drug was 10% or higher in at least one of the four young age strata for the following drugs: ***sedatives*** (***barbiturates***) (11–18%), ***LSD*** (8–22%), ***steroids*** (9–13%), and ***tranquilizers*** (8–12%). See Table 7-2 for specifics.

- For most illicit drugs, the proportion of young adults having any friends who use them decreases with each higher age band, consistent with the age differentials in self-reported use. The steepest declines occur with ***inhalants***—in 2015, 9% of 18-year-olds reported that some friends use versus only 2% of 27- to 30-year-olds. (Inhalant use is not asked of the age groups above 30, precisely because of this sharp decline in use with age.) As reported in *Volume I*, the decline with age in inhalant use is actually well under way by 10th grade.

- For some years, ***cocaine*** showed significantly higher rates of active use among adults compared to 12th graders. That is no longer true, although there is rather little drop-off with age in early adulthood; consequently, there is not a great difference associated with age in having friends who use cocaine (18–25% for all four of the younger age groups). The 35-, 40-, 45-, 50-, and 55-year-olds are asked separately about cocaine powder and crack use; in 2015 far fewer reported having friends who use cocaine powder—13% for age 35 and 4% to 6% for the four older groups.

- For ***crack***, however, the story is different. Reported friends' use of crack now declines sharply with age, although this was not true in the mid-1980s, when measures of crack use were first included in the surveys. In 2014, 9% of 12th graders reported having any friends using crack, versus 7% of 19- to 22-year-olds, 4% of 27- to 30-year-olds, and 1% to 4% of 35- to 55-year-olds. (Due to the printing error previously mentioned, data on friends' use of crack is not available for young adults in 2015.)

- The proportions reporting that they have any friends who take ***heroin*** decrease sharply with age, from 7% among 12th graders in 2015 to 3% among 23- to 26-year-olds. (Older respondents are not asked this question.)

- At present, the percentage reporting any friends who use ***narcotics other than heroin*** showed some increase with age: in 2015 20% of 18-year-olds, 22% of the 19- to 22-year-olds, 24% of the 23- to 26-year-olds, and 29% of 27- to 30-year-olds. This was not always the case. In the late 1990s and early 2000s friends' use decreased with the age of respondents. There was a sharp rise after 2008 in reported use by friends in all the age strata (due to a change in question wording) followed by a falloff in the two younger age strata, especially in 2014, reversing the age differences. (See Table 7-2.)

- In general, it appears that some respondents who report that their friends use ***illicit drugs*** are themselves not directly exposed to that use by their friends, judging by the differences in proportions saying they have some friends who use (Table 7-2) and the proportions who

say they have been around people who were using during the prior year (Table 7-3 and Figure 7-1).

- With respect to ***alcohol*** use, the great majority of young adults have at least *some* friends who ***get drunk at least once a week***, although this peaks in their early to mid-20s and then drops off gradually with age: in 2014 64% of 12th graders, 78% of 19- to 22-year-olds, 86% of 23- to 26-year-olds, 77% of 27- to 30-year-olds, 65% of 35-year-olds, 53% of 40-year-olds, 52% of 45-year-olds, 46% of 50-year-olds, and 35% of 55-year-olds.[6] Given the potential serious consequences of this behavior, these rates are troublingly high across a wide age range. The proportions who say *most or all* of their friends get drunk once a week differ more substantially by age, with a peak in the respondents' early 20s. In 2014, 19% of 12th graders and 29% of 19- to 22-year-olds, declining to 20% of the 23- to 26-year olds, 15% of 27- to 30-year-olds, and 2% of 55-year-olds responded that most or all of their friends get drunk once a week. Note in particular how high these rates are among the high school and college-age populations. In terms of having any direct exposure during the prior year to people who were drinking alcohol "to get high or for 'kicks" (tabular data not shown), having some such exposure was almost universal in the three 4-year age groups of young adults: 90%, 83%, and 86%, respectively, as well as among 18-year-olds (85%) (Table 7-3 and Figure 7-23).

- From ages 18 through 30, between three fifths and four fifths of respondents (60–80%) have at least a few friends who ***smoke cigarettes***, with considerable falloff by age 40. In fact, 7% of the 12th graders and 9-10% of 19- to 26-year-olds state that *most or all* of their friends smoke. Above those ages, the proportions decline to 6% of 27- to 30-year-olds and 3–6% for those 35 years of age and older. This increase in the segregation of smokers from nonsmokers likely reflects the stratification of young people after high school as a function of educational attainment, which is highly correlated with cigarette smoking. Also, it can be seen in Table 7-2 that differences by age were small in the late 1980s and developed during the 1990s as a result of lasting cohort effects.

Trends in Exposure to Drug Use (Ages 18 to 55)

Tables 7-2 and 7-3 also provide *trend* data on the proportions of respondents' friends using drugs and the proportion of respondents directly exposed to drug use by others. Both of these measures of exposure to use will be discussed in this section. As noted previously, trends are available for 19- to 22-year-olds since 1980, for 23- to 26-year-olds since 1984, and for 27- to 30-year-olds since 1988. Data for 35-, 40-, 45-, 50-, and 55-year-olds are available on friends' use since 1994, 1998, 2003, 2008, and 2013, respectively. (Questions about frequency of being around drug users were not included in the questionnaires administered to respondents age 35 and older, so those age bands are not included in Table 7-3 or Figures 7-1 through 7-24. However, they were asked about the proportions of their friends using.) Twelfth-grade data have also been included in these tables for comparison purposes.

Figures 7-1 through 7-24 provide graphic presentation of trends in exposure to use.

[6] Due to the previously mentioned printing error, data are not available for the three young adult age bands, though they are included for the other age bands in Table 7-2.

- An examination of Table 7-3 and Figures 7-1 through 7-6 shows that exposure to illicit drug use (in the 12 months preceding the survey) declines at each higher age band for ***any illicit drug***, ***marijuana***, and ***any illicit drug other than marijuana***, as well as for nearly all of the specific illicit drugs. In general, these differences replicate across different historical periods, with the exception of ***cocaine***, which did not show a decline in exposure with increasing age until after 1996. (Prior to that it showed an increase with increasing age.) With the exception of cocaine, these declines reflect age effects (changes with age observed across multiple cohorts) in both exposure to use and in personal use of most drugs.

- Until 1992, young adults' trends in exposure to use tended to parallel those observed for 12th graders. From 1980 to 1992, that meant a decreasing number of respondents were exposed to ***any illicit drug*** use (Table 7-3 and Figure 7-1) or reported any such use in their own friendship circle (Table 7-2). After 1992, however, an important *divergence* in trends emerged: 12th graders showed a substantial increase in both friends' use and exposure to use (as well as self-reported use); 19- to 22-year-olds showed a similar rise, but lagged by a few years; 23- to 26-year-olds subsequently showed some rise; while the 27- to 30-year-old age band did not show a rise until 2002. As discussed in earlier chapters, this pattern no doubt reflects the emergence of lasting cohort differences that emerged in secondary school and, driven by generational replacement, continued up the age spectrum as the secondary school students grew older. The age differentials expanded in the 1990s during the relapse phase in the drug epidemic; first observed among the 12th graders, the increases in use then occurred on a staggered basis. The age differentials have diminished considerably during the 2000s as use declined some or leveled among the younger age groups but rose among the older ones as the cohort effect worked its way up the age spectrum (see Figure 7-1).

- ***Marijuana*** showed a very similar pattern of change. It is particularly noteworthy that, while 34% of 19- to 22-year-olds in 1980 said *most or all* of their friends used marijuana, only 8% said the same in 1991 (Figures 7-5 and 7-6, and Table 7-2). Clearly, the number of friendship groupings in which marijuana use was widespread dropped dramatically in the 1980s. This measure of friends' use more than doubled to 19% by 1999 during the relapse phase in the larger epidemic, where it remained for a couple of years before falling to 12% by 2008, then increasing to 23% by 2015. Self-reported use (Figure 5-3a) and friends' use both increased significantly among 18-year-olds in 2008, which we interpreted as a turnaround in the marijuana situation. Since 2006, the other adult age strata have shown a considerable increase in the proportion reporting some friends using marijuana.

- The proportion of respondents reporting having any friends who use ***any illicit drugs other than marijuana*** began to decline after 1982 in the two younger age groups spanning 18–22 (for whom we had data at that time; see Figure 7-3). By 1991/1992 there had been a considerable drop in all four age groups (spanning 18–30). This drop appears to be due particularly to decreases in friends' use of ***cocaine*** and ***amphetamines***, although there were decreases for ***sedatives*** (***barbiturates***) and ***tranquilizers*** as well. The levels then began to rise among the 18- to 22-year-olds in the early 1990s, while at the same time declining further for the 23- to 30-year-olds, reflecting cohort effects, opening up a large age-related difference in friends' use in the 1990s and into the early 2000s. The 23- to 26-year-olds

showed a later increase in friends' use and the 27- to 30-year-olds showed a still later increase. After 2001 there was some decline in reported friends' use in the two youngest age strata while friends' use continued to climb in the older two strata. The net effect was to narrow the age differences among the young adult strata considerably. More recently, the gap among the four age bands has narrowed for the proportions saying that they have any friends who use ***some illicit drug other than marijuana***. Since 2004, there has been little change among 18- to 22-year-olds while since 2008 there has been an increase among 23- to 26-year-olds and until 2012, a fairly sharp increase among 27- to 30-year-olds. In 2014, the percentage saying they have any friends who use some illicit drug other than marijuana declined for those under 22, but increased among those ages 23–30. Among those ages 35 and older, considerably fewer report having any friends who use (between 19% and 21%). See Table 7-2 for the specifics. The similar trends in exposure to use are shown in Figure 7-3 and 7-4.

- Between 1986 and about 1992, all four age groups showed a considerable drop in the proportion of respondents with friends who used ***cocaine*** and in exposure to cocaine use (Figure 7-11). (Self-reported use declined sharply in the same period.) After that decline, the rates of friends' use peaked in 1998 among 18-year-olds, in 2004 among 19- to 22-year-olds, and in 2006 among 23- to 30-year-olds, suggesting another cohort effect. In 2007 friends' use began a fair decline among 18-year-olds followed by a similar decline among 19- to 22-year-olds in 2009, a decline among 23- to 26-year-olds beginning in 2012, and a decline among 27- to 30-year-olds in 2013. These changes, staggered by age since the mid-1990s, reflect cohort effects. The story for ***crack*** has been fairly similar (Table 7-2).

- There were substantial increases between the early 1990s and about 2000 in the proportion of 18-year-olds and 19- to 22-year-olds reporting that they have friends using ***narcotics other than heroin*** without medical supervision, and there were smaller increases among 23- to 30-year-olds, resulting in some considerable age-related differences. After 2002, the proportions of 18-year-olds and 19- to 22-year-olds declined some, while the 23- to 30-year-olds continued to increase in a classic cohort-effect pattern of change, thus narrowing the age differences by 2009. There was a wording change in 2010 that served to increase the rates considerably for all age groups (Figure 7-15). Since then, all age bands have shown a decline in exposure to use and in having any friends who use these narcotic drugs.

- The proportions saying that any of their friends use ***MDMA (***ecstasy, and more recently, Molly) increased sharply in all age groups between 1992 and 2001 or 2002, though in a staggered fashion (Table 7-2). Twelfth graders showed the first sharp increase beginning after 1992, 19- to 22-year-olds after 1994, 23- to 26-year-olds after 1996 and 27- to 30-year-olds after 1997. These sharp increases ended among 12th graders in 2001 and among 19- to 30-year-olds a year later. Since those peak levels, the proportions saying that they had any friends using ecstasy have generally declined, corresponding with a decline in self-reported use. In all four age groups, 18–24% now report that any of their friends use ecstasy. The staggered nature of past increases suggests a cohort effect at work, but the simultaneous decline strongly suggests a secular trend, likely due to the heavy media coverage of adverse consequences associated with ecstasy use during that period.

- For all four of the youngest age groups (spanning ages 18–30), the proportions saying that they were often exposed to others drinking ***alcohol*** declined modestly between 1987 and 1992 (Figure 7-24). The next decade saw rather little change in the four youngest age bands. Since 2002, however, exposure among the 18-year-olds has declined considerably, followed by declines among the 19- to 22-year-olds and then the 23- to 26-year-olds, while still rising among 27- to 30-year-olds, resulting in rather little differences among the age groups for a few years. This is again indicative of a cohort effect with staggered decreases radiating up the age spectrum as the cohorts age. One would predict a decline soon among the 27- to 30-year-olds, based on this analysis. The decline among the 18-year-olds has continued into 2015, thus beginning to widen the differences among the different age groups.

- The age groups above age 30 have consistently been much less likely to report that any of their friends ***get drunk*** at least once a week, compared with those ages 18 to 26 (Table 7-2). These proportions increased starting at different times: after 1998 among 35-year-olds, after 2004 among 40-year-olds, and after 2005 among 45-year-olds, suggesting somewhat enduring cohort differences. The net effect has been to reduce the differences separating those in their 20s from those in later decades in terms of the proportion having any friends who get drunk at least once a week. The rates in 2015 for the four youngest age strata were very high—between 82% among 12th graders and 65% among 27- to 30-year-olds. Among the older age band there has been some increase over the past decade or so in the proportion saying that any of their friends get drunk at least once a week. On the other hand, the proportions saying that most or all of their friends get drunk that often are considerably smaller and decline sharply with age.

- Among 12th graders, the proportion who said *most or all of their friends smoked* ***cigarettes*** declined appreciably between 1975 and 1981, the same period in which self-reported use declined. After that, neither measure showed much change until about 1992. Thereafter, substantial increases in both measures occurred. By 1997, one third (34%) of 12th graders reported that most or all of their friends smoked cigarettes (up from 21% in 1992); since then, that statistic declined (along with self-reported use) to 14% in 2008, and then further, reaching 7% in 2015. Among 19- to 22-year-olds, a decline in friends' use occurred between 1980 (or possibly earlier) and 1985, followed by a leveling through 1994. The percentage saying most or all of their friends smoke increased from 22% in 1994 to 29% in 2000, before beginning to decline, reaching 9% in 2015. Among 23- to 26-year-olds, a downturn was evident between at least 1984 (the first year for which data are available) and 1988, and then reported friends' use leveled (10% in 2015). After 2002, some slight increases occurred, followed by a reversal from 2004 to 2012 These staggered changes, until about 1998, illustrate that cohort effects were moving up the age spectrum. Since 1998 (or the earliest year available for the age bands above age 30), the proportion saying that any of their friends smoked cigarettes showed some decline among those above age 30, but little or no change among 23- to 30-year-olds (which contains some of the heavier smoking 12th graders of the mid-1990s) until about 2006. All of the age strata, with one very minor exception among 35-year-olds, show rates in 2015 that are somewhat below where they were in 2008, following a gradual decline in recent years. *Nearly all of these changes in exposure to drug use parallel changes in self-reported use by these age groups. This*

pattern reinforces the validity of self-report data, because there would presumably be less motivation to distort answers about the proportion of an unnamed set of friends who use a drug than about one's own use. The systematic nature of the patterns of change across age strata (whether in terms of parallel changes consistent with a secular trend, or systematically staggered ones consistent with a cohort-related trend) is also supportive of the data validity.

PERCEIVED AVAILABILITY OF DRUGS AMONG ADULTS (AGES 18–55)

Adults participating in the follow-up surveys receive questions identical to those asked of 12th graders regarding how difficult they think it would be to get each of the various drugs if they wanted them. The questions are contained in only one of the six questionnaire forms used through modal age 30. Data for the young adult follow-up samples, which are grouped into the same four-year age bands used above (19–22, 23–26, 27–30), are presented in Table 7-4, along with data for 12th graders and 35-, 40-, 45-, 50-, and 55-year-olds. Sample sizes are presented at the bottom of the table. The availability question is not asked for all drugs in the adult samples, as may be seen in Table 7-4.

Perceived Availability

Much like 12th graders, substantial proportions of the American adult population have access to various illicit drugs. (We do not ask about access to alcohol and cigarettes because we assume these are readily available to all adults.)

- ***Marijuana*** *was by far the most readily available of the illicit drugs in 2015 (and in all previous years) with 87–92% of the young adult age groups (19–30) saying it would be "fairly easy" or "very easy" to get if they wanted some. Perceived access decreased somewhat with age after age 30, but even at age 55, nearly three quarters of respondents (72%) say they could get marijuana fairly or very easily (Table 7-4).*

- Though less available than marijuana, ***amphetamines*** were still fairly available, with 55–57% of young adults and 32–37% of those 35, 40, 45, 50, and 55 years old saying they would be fairly or very easy to get.

- ***Cocaine*** was reported as readily available in 2015 by a significant proportion of young adults, with 33–39% saying it would be easy to get—higher than the 29% observed among the18-year-olds. ***Powdered cocaine*** availability was highest among those ages 23 to 35. ***Crack*** was seen as available to smaller proportions than powdered cocaine and was most available to those ages 27 and above (25–30%) in 2015. Interestingly, perceived availability for both forms of cocaine tended to rise with age between 19 to 22 years old and 27 to 30 years old.

- In 2015 about one fifth (20–21%) of the youngest three age bands said that they could get ***heroin*** fairly or very easily, though far fewer report having used heroin. Reported availability was a bit higher for the 27- to 30-year-olds (27%). (The question is not asked of respondents above age 30.)

- About half of all young adults (48–61%) in 2015 said that they could get ***narcotics other than heroin*** fairly easily, as did 39% of 12th graders. (The question is not asked of respondents above age 30.)

- ***Sedatives*** (***barbiturates***) were a bit less available than amphetamines to these age groups, with little variation across age up to age 30 (35–43%). (The question is not asked of respondents above age 30.)

- ***Tranquilizers*** were reported as available in 2015 by considerably fewer respondents (17–22%), which historically was not always the case. (The question is not asked of respondents above age 30.)

- ***Ecstasy*** (***MDMA***) was seen as readily available to 33–39% of young adults and 12th graders in 2015. (The question is not asked of respondents above age 30.)

- ***Hallucinogens other than LSD*** (which for the most part refer to psilocybin in recent years) were reported as available by 31% of 12th graders and by similar percentages (27–35%) of the three young adult strata. (The question is not asked of respondents above age 30.)

- ***LSD*** was one of the least available drugs in 2015, declining by age group from 27% among 12th graders to 20% among 55-year-olds.

- ***Crystal methamphetamine*** (***ice***) was perceived to be less available than LSD (between 15% and 20% in 2015), with availability highest among 27- to 30-year-olds. (The question is not asked of respondents above age 30.)

- ***Anabolic steroids*** were perceived to be readily available by between 18% and 25% of all four age strata (Table 7-4). (The question is not asked of respondents above age 30.)

Trends in Perceived Availability

- ***Marijuana*** has been almost universally available to the adolescent and young adult age groups throughout the historical periods covered by the data. Overall, perceived availability has risen in the six older age groups on whom trend data are available during the 2000s—that is, from 27- through 55-year-olds—but has simultaneously declined among 12th graders and held relatively steady among 19- to 23-year-olds. As a result, there is now less variability by age in availability of marijuana (Table 7-4). From the peak year in 1979, perceived availability decreased slightly through 1991 among 12th graders and decreased slightly more from 1980 through 1991 among 19- to 22-year-olds. After the late 1990s, the trends in availability across the age bands had generally been quite parallel, suggesting secular trends in prevailing conditions that affected availability. Perceived availability is now somewhat higher for the younger age groups (80–92% for 12th graders through 27- to 30-year-olds versus 72–86% for those ages 35 to 55).

- Historic highs in perceived availability of ***cocaine*** occurred in the 1980s among all three young adult age strata (ages 19–30), reaching highest proportions in 1988 and 1989, at which time the older young adult age strata had higher availability than the younger ages.

(From a policy perspective, it is worth noting that in 1987 the perceived availability of cocaine *increased* while use actually dropped sharply.) In the early 1990s, all four groups reported decreased availability by 4–7 percentage points—quite parallel to the drop in numbers of those who had friends who were users and to the decline in personal use. Until about 2000, there was some falloff in perceived cocaine availability in all age strata through age 30—particularly among those ages 23 through 30—and an increasing convergence. Since about 2007 all four age strata have shown considerable declines in reported cocaine availability, and these declines continued into 2015 among the three young adult strata. The 18-year-olds also showed a considerable decline from 2007 (47% said it would be fairly or very easy to get) to 2011 (31%), followed by a leveling. (The question is not asked of respondents above age 30.)

- ***Crack*** availability peaked in 1988–1989 for all age groups (it was first assessed in 1987) and declined through 1992, with little further change until 1995. Since 1995, crack availability has declined substantially in all of the lower four age strata (ages 18–30). Data on 35-, 40-, 45-, and 50-year-olds are available for shorter intervals, but also show appreciable declines from initial measurements.

- In 2015, between 16% and 27% of each age group said they could get ***LSD*** fairly easily, which contrasts quite dramatically with the mid-1990s, when over 50% of those in the younger age strata said they could get it. Across the decades measured, the trends in LSD availability among young adults have had some parallels to those among 12th graders. For 12th graders, there was a drop of about 10 percentage points in the mid-1970s, and a later drop from 1980 to 1986. The latter drop, at least, was paralleled in the data from 19- to 22-year-olds. After 1986, LSD availability increased considerably in all age bands, reaching its peak levels by 1995 during the relapse phase of the illicit drug epidemic. At that time a considerable age-related difference developed, with availability lower in the older age groups. Since 1995, availability has fallen substantially in all age bands but particularly in the youngest two age bands, narrowing the differences among the age groups. Indeed, the drop-off in availability of LSD to 12th graders and 19- to 22-year-olds was quite sharp in 2002, probably contributing to the steep decline in use that year because changes in attitudes and beliefs about LSD cannot explain it. In 2012 all age bands except the 18-year-olds showed some further decline in the availability of LSD, but there has been rather little systematic change in reported availability since then. Availability was the highest in 2015 at 27%% among 18-year-olds and considerably lower among those ages 27 and above (16–21%). Fifty-five-year-olds are not asked the question.

- Since 2001 the general pattern regarding the availability of ***hallucinogens other than LSD*** has been one of stability. Levels of availability have been more differentiated by age than in prior decades, though these differences have diminished in recent years. (This question is not asked of respondents over age 30.) Generally, the younger the age group, the higher the reported availability, though there has been a considerable convergence in the past few years. In the early 1980s, there was a fair decline among all age groups in the availability of hallucinogens other than LSD. There was little additional change through 1992. From 1992 to 1995, the three youngest age groups all showed an increase in availability, with 12th graders showing the largest increase. From 1996 to 2000, availability was fairly steady.

All age groups showed substantial increases in 2001, undoubtedly due to the changed question wording which added *shrooms*, among other substances to the examples of hallucinogens. (Shrooms refer primarily to psilocybin mushrooms.) It appears that the inclusion of shrooms as an example introduced a greater variability with age in reported availability of hallucinogens other than LSD taken as a class.

- ***MDMA (ecstasy*** and, more recently, ***Molly)*** questions were first introduced in MTF surveys in 1989 and 1990 (and are not asked of those over age 30). Availability rose very substantially in all of these age groups during the 1990s and early 2000s. Among 12th graders, reported availability nearly tripled from 22% in 1989 to 62% in 2001—the peak year of use for 12th graders. All four age groupings showed sharp increases in 2000 and 2001, with the older age groups continuing to increase through 2002—their peak year for use. The availability of ecstasy showed considerable declines among the two youngest strata after 2002 and among the 23- to 30-year-olds since about 2004. Reported availability of ecstasy varied little by age in 2015, ranging between 33% and 39% among 18-year-olds and the three young adult strata covered.

- All age groups have shown some gradual, modest decline in ***heroin*** availability since about 1997 or 1998, during which interval there has been rather little variability in heroin availability across the 18-to-30 age range. (The question is not asked of respondents over age 30.) Heroin availability varied within a fairly narrow range from 1980 to 1985, then increased in all age groups through 1990. For the younger ages (18–22) heroin availability rose further through 1995 while in the older two age groups it increased some later in the 1990s. It is clear that heroin was much more available to all of these age groups in the 1990s than it was in the 1980s. This increase in the availability—and purity—of heroin most likely led to the emergence of non-injection forms of heroin use observed during this period. In recent years, heroin availability has generally declined modestly among young adults and 18-year-olds; however, two of the four age strata showed some increase in perceived availability in 2014, while in 2015 all four showed non-significant increases.

- The availability of ***narcotics other than heroin*** rose slowly among all age groups from 1980 until recent years, with the exception of a period of considerable stability from 1989 through 1994. (Respondents over age 30 are not asked this question.) After 1994, the modest increase in availability was accompanied by steadily rising use. Recent years showed a very slight falloff in availability among all age strata except the 27- to 30-year-olds, who continued to show an increase through 2013, followed by a sharp and significant 8.2 percentage point drop in 2014. Indeed, all four age strata showed substantial drops in the availability of narcotics in 2014, three of which were statistically significant. In 2015 the two younger age strata showed further non-significant declines while the 23- to 26-year-olds showed little change and the 27- to 30-year-olds showed a sizeable but not significant increase. *It seems clear that availability of these drugs has been going down since 2011, likely in response to state and federal efforts to reduce their abuse by reducing availability with state registries, etc.* (Note that reported availability jumped in 2010, when new drugs, including Vicodin and OxyContin, were added to the list of examples in the question.) For the most part, there has not been a consistent difference by age in the availability of narcotics other than heroin among those ages 18 to 30; prior to 2011 the

predominant trend was one of increasing availability over a long period of time in the 23- to 30-year-old segment. The addition of newer drugs, like OxyContin and Vicodin, to the list of examples resulted in some further increase, which suggests that availability climbed considerably more over the past decade or so than the data based on the original question had suggested.

- In general, the age groups above age 30 have reported somewhat lower availability of ***amphetamines*** than the younger strata, but not dramatically lower. Furthermore, those ages 19 to 30 have had the highest levels of availability in recent years, partly because availability among 12th graders declined appreciably since 1998, when they had the highest level of availability. These differential rates of reported availability across the age groups emerged after 1992, when prevalence of use began to rise among 12th graders. In 1982, availability peaked for both 12th graders and 19- to 22-year-olds, after which it fell through 1991 by 14–15 percentage points. Among 23- to 26-year-olds, there was a decline of 14 percentage points between 1984 (when data were first available) and 2005. For 27- to 30-year-olds, reported availability decreased by nine percentage points between 1988 (the first measurement point) and 2005. Decreases also occurred among 35-year-olds in the 2000s but some reversal has been evident in recent years. In 2011 all age strata from age 18 through age 35 showed an increase in perceived availability for amphetamines, statistically significant for those ages 19–22 and 23–26 years old, followed by little systematic change since. It should be noted that the examples of amphetamines used in the question text were updated in 2011 to include Adderall and Ritalin, while pep pills and bennies were eliminated as examples. Therefore, the sharp rise in reported *availabilit*y of amphetamines in 2011 among young adults may be nothing more than a method artifact resulting from the revision of the examples provided.

- By way of contrast, ***crystal methamphetamine*** or "***ice***" exhibited an increase in availability in the 1990s, rising for all four age strata from 1991 to 1998/1999 before stabilizing with similar rates of availability from ages 18 to 30. (This question was not asked of those over 30.) All four strata have shown some decline in recent years, starting with the youngest three age strata after 2006 and the 27- to 30-year-olds after 2008. Availability is now lowest for the youngest three age bands—a reversal of the situation in the early 1990s—but the differences among the age groups have largely disappeared over the past few years (Table 7-4).

- ***Sedatives*** (***barbiturates***) exhibited a long-term decline in availability over more than two decades from about 1981 or 1982 through 2003 in the two younger groups—a 20-percentage-point drop among 12th graders and a 23-percentage-point drop among 19- to 22-year-olds. All groups showed increased perceived availability in 2004—no doubt due primarily to an updating of the examples given in the question. There was a significant decline of 21 percentage points among 12th graders since 2004, of 12 percentage points among the 19- to 22-year-olds since 2007, of 16 percentage points among 23- to 26-year-olds since 2006, and of 4 percentage points among 23- to 26-year-olds since 2007. Perceived availability was considerably higher in the 27- to 30-year-old group (43%) than in the 18-year-old group (25%).

- ***Tranquilizer*** availability has declined long-term by about four fifths among 12th graders, from 72% in 1975 to 15% in 2015. Since 1980, when data were first collected for 19- to 22-year-olds, tranquilizer availability declined by more than three fourths (from 67% in 1980 to 20% in 2015), such that previous differences in availability between these two groups were eliminated by 1992. The older young adult age groups have also shown a considerable decline in the availability of tranquilizers through 2015, considerably narrowing the differences among them. For the most part, trend lines for the different age groups have been quite parallel, as has been true for sedatives (barbiturates). Indeed, tranquilizers have shown the most consistent pattern of change in perceived availability since MTF began. By 2015 only 15% of the 18-year-olds said that tranquilizers were fairly or very easy to get, and only 17% to 22% of the three young adult age bands said the same.

- Data on ***steroid*** availability were first gathered in 1990 (Table 7-4). There has been some decline in availability in all age groups since about 2000, including a sharper rate of decline in the youngest three age strata after 2007. (This question was not asked of those over 30.) While younger respondents used to report higher levels of availability than those in the older strata, by 2015 there was not much difference among them (from 18% to 25%). Eighteen year olds reported the lowest level of perceived availability in 2014 due to a significant decrease of 6.6 percentage points that year, bringing 18 year olds to 22% (24% in 2015)—a decline of more than half since 1991. In fact, all of the age groups were at or near their lowest point in 2015.

TABLE 7-1
Trends in Proportions of Respondents Reporting Their Close Friends Disapproving of Drug Use among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

Percentage saying friends disapprove [a]

Q. How do you think your close friends feel (or would feel) about you. . .	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Trying marijuana once or twice	18	42.6	46.4	50.3	52.0	54.1	54.7	56.7	58.0	62.9	63.7	70.3	69.7	73.1	66.6	62.7	58.1	55.8	53.0
	19–22	41.0	40.6	46.9	47.1	51.6	54.5	55.2	54.7	58.7	63.0	63.6	64.7	64.7	63.4	63.7	58.5	64.3	58.4
	23–26	—	—	—	—	47.7	47.0	49.1	53.9	58.2	62.6	61.3	64.5	65.6	65.5	63.2	63.8	61.2	59.3
	27–30	—	—	—	—	—	—	—	—	58.6	58.7	61.4	64.6	63.5	64.4	66.3	66.1	65.8	65.0
Smoking marijuana occasionally	18	50.6	55.9	57.4	59.9	62.9	64.2	64.4	67.0	72.1	71.1	76.4	75.8	79.2	73.8	69.1	65.4	63.1	59.9
	19–22	50.9	49.2	54.0	57.9	59.4	64.6	64.4	65.1	69.8	71.5	74.1	73.9	74.3	73.1	73.0	66.6	71.3	65.1
	23–26	—	—	—	—	54.3	56.4	57.1	63.1	68.1	73.2	71.8	72.5	75.3	73.5	72.2	70.7	70.8	68.5
	27–30	—	—	—	—	—	—	—	—	67.8	69.4	71.9	73.7	76.0	75.1	76.4	73.8	75.6	72.4
Smoking marijuana regularly	18	72.0	75.0	74.7	77.6	79.2	81.0	82.3	82.9	85.5	84.9	86.7	85.9	88.0	83.5	80.6	78.9	76.1	74.1
	19–22	70.3	75.2	75.7	79.5	80.0	82.7	83.5	84.8	86.9	87.5	89.1	88.4	89.1	87.6	85.9	83.9	84.5	83.3
	23–26	—	—	—	—	77.8	78.4	80.9	82.0	85.8	89.2	88.1	87.9	90.3	89.1	88.8	84.9	89.5	85.6
	27–30	—	—	—	—	—	—	—	—	85.4	86.0	88.4	89.2	88.7	88.2	88.9	89.7	89.6	87.8
Trying LSD once or twice	18	87.4	86.5	87.8	87.8	87.6	88.6	89.0	87.9	89.5	88.4	87.9	87.9	87.3	83.5	83.4	82.6	80.8	79.3
	19–22	87.4	90.5	88.0	89.3	89.3	91.1	90.5	91.8	90.8	91.2	89.1	89.9	87.2	87.7	87.9	84.6	85.3	83.6
	23–26	—	—	—	—	87.4	90.8	88.6	89.8	88.9	91.0	90.1	92.4	88.9	87.7	86.3	85.3	88.5	85.4
	27–30	—	—	—	—	—	—	—	—	88.8	89.7	92.3	91.1	91.4	89.9	91.2	89.7	89.3	88.5
Trying cocaine once or twice	18	—	—	—	—	—	—	79.6	83.9	88.1	88.9	90.5	91.8	92.2	91.1	91.4	91.1	89.2	87.3
	19–22	—	—	—	—	—	—	76.4	—	84.8	87.7	89.2	92.3	91.9	92.4	94.7	91.7	91.5	91.8
	23–26	—	—	—	—	—	—	70.8	—	81.4	84.5	84.1	86.7	87.4	87.7	87.9	90.4	90.0	91.1
	27–30	—	—	—	—	—	—	—	—	81.8	81.1	83.7	83.5	84.4	86.1	87.8	87.5	88.7	89.4
Taking cocaine occasionally	18	—	—	—	—	—	—	87.3	89.7	92.1	92.1	94.2	94.7	94.4	93.7	93.9	93.8	92.5	90.8
	19–22	—	—	—	—	—	—	84.9	—	91.0	93.8	94.2	95.6	95.9	95.6	97.5	95.6	95.7	96.6
	23–26	—	—	—	—	—	—	81.7	—	88.2	91.5	92.4	94.1	93.8	93.5	94.3	94.6	95.4	95.1
	27–30	—	—	—	—	—	—	—	—	87.7	89.5	90.0	92.2	92.3	92.8	94.6	94.1	94.6	94.2
Trying an amphetamine once or twice	18	78.9	74.4	75.7	76.8	77.0	77.0	79.4	80.0	82.3	84.1	84.2	85.3	85.7	83.2	84.5	81.9	80.6	80.4
	19–22	75.8	76.7	75.3	74.3	77.0	79.7	81.5	81.3	83.0	83.5	84.5	86.5	83.8	85.0	87.2	83.1	86.0	84.5
	23–26	—	—	—	—	78.4	79.1	76.7	81.7	83.0	85.6	84.3	85.0	83.6	84.2	84.7	87.6	86.5	83.3
	27–30	—	—	—	—	—	—	—	—	82.7	84.1	84.9	84.6	84.7	84.1	85.9	85.5	85.6	85.9
Taking one or two drinks nearly every day	18	70.5	69.5	71.9	71.7	73.6	75.4	75.9	71.8	74.9	76.4	79.0	76.6	77.9	76.8	75.8	72.6	72.9	71.5
	19–22	71.9	72.1	68.6	73.5	71.6	72.2	72.7	70.2	73.9	77.1	73.3	73.7	74.0	71.2	73.0	68.3	68.9	73.5
	23–26	—	—	—	—	63.6	66.8	67.7	68.3	69.2	70.8	72.7	72.5	72.1	67.6	71.5	68.2	72.8	68.1
	27–30	—	—	—	—	—	—	—	—	71.0	68.0	70.4	71.9	68.8	73.2	70.9	68.8	65.7	67.3
Taking four or five drinks nearly every day	18	87.9	86.4	86.6	86.0	86.1	88.2	87.4	85.6	87.1	87.2	88.2	86.4	87.4	87.2	85.2	84.1	82.6	82.5
	19–22	93.7	91.7	89.9	91.9	91.7	92.5	91.5	90.8	90.4	92.5	89.9	91.7	92.6	89.6	90.1	88.8	88.1	90.0
	23–26	—	—	—	—	90.8	90.2	92.5	92.8	93.7	92.1	92.1	92.4	91.1	93.1	92.1	92.2	92.6	90.7
	27–30	—	—	—	—	—	—	—	—	92.8	92.0	92.9	92.7	92.7	93.9	94.0	92.9	91.9	93.8
Having five or more drinks once or twice each weekend	18	50.6	50.3	51.2	50.6	51.3	55.9	54.9	52.4	54.0	56.4	59.0	58.1	60.8	58.5	59.1	58.0	57.8	56.4
	19–22	53.5	51.7	51.7	53.3	50.8	53.3	47.0	49.4	50.5	56.8	53.1	51.4	53.6	51.9	54.4	55.5	52.1	56.4
	23–26	—	—	—	—	53.8	57.3	61.0	57.2	58.8	57.5	55.1	56.8	58.4	57.6	61.4	58.9	58.4	55.6
	27–30	—	—	—	—	—	—	—	—	61.9	65.1	66.3	68.2	66.2	66.7	63.7	64.6	61.6	64.0
Smoking one or more packs of cigarettes per day	18	74.4	73.8	70.3	72.2	73.9	73.7	76.2	74.2	76.4	74.4	75.3	74.0	76.2	71.8	72.4	69.2	69.3	68.5
	19–22	75.6	75.1	75.4	78.5	76.2	79.7	77.7	78.6	80.2	78.4	77.5	78.3	79.0	76.0	73.8	70.9	73.9	76.5
	23–26	—	—	—	—	73.9	77.3	80.3	80.5	79.5	80.5	78.5	83.3	82.3	77.4	80.1	78.8	78.3	75.8
	27–30	—	—	—	—	—	—	—	—	81.2	80.9	82.9	84.5	83.1	86.8	82.5	83.4	81.9	80.5
Approximate Weighted N =	18	*2,766*	*3,120*	*3,024*	*2,722*	*2,721*	*2,688*	*2,639*	*2,815*	*2,778*	*2,400*	*2,184*	*2,160*	*2,229*	*2,220*	*2,149*	*2,177*	*2,030*	*2,095*
	19–22	*569*	*597*	*580*	*577*	*582*	*556*	*577*	*595*	*584*	*555*	*559*	*537*	*520*	*510*	*470*	*480*	*471*	*466*
	23–26					*510*	*548*	*549*	*540*	*510*	*513*	*516*	*516*	*507*	*481*	*463*	*445*	*436*	*419*
	27–30									*483*	*518*	*479*	*480*	*451*	*451*	*457*	*439*	*439*	*422*

(Years Cont.)

(Table continued on next page.)

TABLE 7-1 (cont.)
Trends in Proportions of Respondents Reporting Their Close Friends Disapproving of Drug Use among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

Q. How do you think your close friends feel (or would feel) about you. . .	Age Group	Percentage saying friends disapprove [a] 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Trying marijuana once or twice	18	53.8	55.1	58.1	57.6	54.1	58.4	59.5	60.9	62.3	60.4	60.8	61.4	54.9	53.0	52.9	51.2	50.4	51.0	+0.6
	19–22	57.0	56.5	56.0	54.2	53.4	56.5	61.0	57.9	60.5	58.4	62.4	57.0	57.4	52.4	54.6	52.2	50.7	46.7	-4.1
	23–26	66.5	62.6	64.6	55.2	53.8	51.4	57.7	55.9	60.7	55.8	62.1	57.1	58.0	55.5	59.3	50.2	50.1	43.7	-6.4
	27–30	65.4	61.8	63.9	64.9	67.1	61.9	67.2	61.2	64.1	58.2	57.1	55.6	60.5	57.1	56.8	48.2	49.5	45.5	-4.0
Smoking marijuana occasionally	18	60.4	61.6	63.9	64.3	60.3	64.2	65.0	67.6	68.1	65.8	66.3	68.5	61.8	59.4	59.5	57.6	56.2	58.1	+1.9
	19–22	65.1	64.6	61.8	61.0	62.6	63.3	70.1	67.2	68.8	70.6	67.5	65.9	67.1	60.6	60.9	59.0	59.5	54.1	-5.4
	23–26	73.6	70.2	70.9	63.9	64.5	61.6	63.5	65.5	71.3	63.8	70.1	66.8	63.4	64.7	69.3	60.9	57.6	54.9	-2.7
	27–30	74.9	74.5	75.0	74.2	72.9	71.4	76.9	70.4	74.9	66.4	67.0	64.6	68.3	64.9	67.1	59.7	60.1	57.8	-2.2
Smoking marijuana regularly	18	74.7	74.5	76.1	77.8	75.3	77.0	77.3	79.5	79.8	78.3	78.0	79.1	73.8	73.3	72.7	71.2	70.1	70.9	+0.8
	19–22	81.1	78.2	78.5	80.0	80.5	79.1	84.4	82.2	84.1	83.7	81.4	81.9	81.1	76.3	74.5	75.2	77.1	74.3	-2.8
	23–26	87.1	86.8	86.9	83.7	82.8	80.0	79.2	82.7	83.7	81.9	87.1	81.9	83.5	82.7	83.8	77.7	76.7	71.6	-5.1
	27–30	90.8	89.2	91.6	90.1	87.9	87.2	88.0	87.7	88.2	84.3	84.5	83.4	87.5	83.4	86.1	80.8	81.5	76.2	-5.3
Trying LSD once or twice [b]	18	81.7	83.2	84.7	85.5	84.9	87.5	87.3	88.4	89.5	88.4	86.3	87.2	84.5	85.6	85.0	84.9	84.6	81.9	-2.7
	19–22	81.7	82.0	82.1	85.2	86.9	86.9	88.6	90.5	90.4	90.0	90.0	87.1	—	—	—	—	—	—	—
	23–26	87.6	84.5	85.3	82.8	83.6	79.3	82.4	85.6	89.3	90.4	88.4	88.3	—	—	—	—	—	—	—
	27–30	88.7	88.4	85.6	87.4	86.3	87.1	87.7	86.9	88.5	83.5	85.3	84.6	—	—	—	—	—	—	—
Trying cocaine once or twice [b]	18	88.8	88.7	90.2	89.3	89.1	91.2	87.9	89.0	88.7	89.6	88.7	90.2	89.7	89.7	89.2	89.2	88.6	87.0	-1.6
	19–22	90.0	91.2	89.4	89.1	91.7	90.6	90.3	90.3	91.2	93.3	90.2	91.2	—	—	—	—	—	—	—
	23–26	92.0	89.6	90.5	88.0	88.5	83.6	84.2	84.6	88.7	91.7	91.0	91.0	—	—	—	—	—	—	—
	27–30	89.3	90.5	90.4	89.3	88.8	89.9	91.8	89.5	92.0	86.4	88.0	84.5	—	—	—	—	—	—	—
Taking cocaine occasionally [b]	18	92.2	91.8	92.8	92.2	92.2	93.0	91.0	92.3	92.4	93.1	92.0	92.7	91.8	92.9	92.8	92.5	91.4	90.6	-0.8
	19–22	93.1	95.7	94.7	94.5	95.6	95.1	96.0	95.3	96.1	97.1	95.5	95.6	—	—	—	—	—	—	—
	23–26	95.2	95.2	96.7	94.7	93.2	91.2	90.1	93.0	94.9	95.9	96.6	95.6	—	—	—	—	—	—	—
	27–30	96.1	95.4	95.9	94.2	94.0	95.1	96.3	94.5	95.4	93.2	94.3	94.3	—	—	—	—	—	—	—
Trying an amphetamine once or twice [b]	18	82.6	83.0	84.1	83.8	83.3	85.9	84.7	86.1	86.7	87.3	87.1	87.0	85.8	84.6	83.7	83.5	83.2	83.2	0.0
	19–22	84.0	85.8	81.6	84.5	87.6	87.6	89.4	88.9	89.4	89.1	90.2	87.4	—	—	—	—	—	—	—
	23–26	87.0	85.9	85.1	83.1	83.9	81.5	82.7	86.2	89.9	89.3	89.6	87.2	—	—	—	—	—	—	—
	27–30	85.8	87.2	87.8	86.4	86.0	87.9	88.9	87.5	88.5	82.9	85.3	85.6	—	—	—	—	—	—	—
Taking one or two drinks nearly every day [b]	18	72.3	71.7	71.6	73.4	71.6	74.7	72.8	74.0	73.2	74.5	75.2	75.5	75.0	74.9	74.0	75.4	74.0	76.3	+2.3
	19–22	67.3	68.6	66.6	64.9	68.5	64.4	72.4	68.3	68.7	68.4	69.5	68.8	—	—	—	—	—	—	—
	23–26	66.9	66.1	65.4	64.4	61.6	62.1	61.8	62.3	66.1	62.5	63.4	59.4	—	—	—	—	—	—	—
	27–30	66.7	64.3	67.3	67.1	64.0	64.5	65.0	62.8	64.9	59.4	58.9	59.8	—	—	—	—	—	—	—
Taking four or five drinks nearly every day [b]	18	82.8	82.2	82.8	84.4	80.1	83.1	82.9	82.7	83.3	84.8	84.7	84.6	83.4	85.8	84.1	85.8	83.8	85.3	+1.5
	19–22	85.9	87.9	86.6	84.6	87.7	86.8	89.8	86.8	89.0	90.7	88.8	89.9	—	—	—	—	—	—	—
	23–26	93.7	89.9	92.5	91.1	88.1	89.3	87.8	89.1	90.8	87.8	93.8	89.1	—	—	—	—	—	—	—
	27–30	92.1	95.3	92.4	91.2	92.7	92.6	92.5	93.4	92.3	91.3	89.0	93.1	—	—	—	—	—	—	—
Having five or more drinks once or twice each weekend	18	55.5	57.6	57.7	57.8	55.6	60.3	59.4	59.9	60.6	60.0	62.1	63.5	62.0	62.2	62.3	65.2	65.6	68.5	+2.9
	19–22	52.8	51.8	45.2	47.4	50.4	47.9	52.4	53.2	54.8	54.4	55.2	54.6	47.7	48.7	53.9	53.0	54.5	50.4	-4.2
	23–26	60.0	54.5	56.6	56.9	52.9	49.5	49.5	51.9	56.0	51.3	55.3	51.0	51.2	50.7	53.4	48.5	52.3	49.7	-2.6
	27–30	63.0	57.7	65.8	58.8	63.3	59.6	64.6	56.9	62.7	56.3	57.3	52.7	52.9	50.6	53.7	52.7	57.1	52.8	-4.3
Smoking one or more packs of cigarettes per day	18	69.0	71.2	72.6	74.5	75.7	79.2	78.6	81.1	81.2	81.4	82.5	81.6	81.4	81.6	83.2	84.4	84.0	85.1	+1.1
	19–22	69.2	73.9	71.1	74.3	77.3	78.3	82.1	82.7	84.8	87.0	85.5	86.8	85.7	84.8	89.2	87.9	90.9	90.7	-0.3
	23–26	76.5	78.0	79.9	77.0	75.4	78.3	77.6	77.4	84.4	82.6	88.2	88.1	88.0	88.2	90.6	85.5	89.6	88.5	-1.1
	27–30	81.9	82.6	84.0	83.6	86.1	84.0	84.6	82.2	84.1	81.3	83.9	85.0	89.5	88.4	88.1	90.0	89.4	92.2	+2.8
Approximate Weighted N =	18	*2,037*	*1,945*	*1,775*	*1,862*	*1,820*	*2,133*	*2,208*	*2,183*	*2,183*	*2,161*	*2,090*	*2,033*	*2,101*	*2,132*	*2,126*	*1,916*	*1,863*	*1,992*	
	19–22	*436*	*430*	*379*	*402*	*361*	*399*	*427*	*395*	*395*	*361*	*370*	*389*	*347*	*364*	*337*	*309*	*289*	*263*	
	23–26	*425*	*394*	*398*	*378*	*366*	*363*	*377*	*361*	*344*	*349*	*336*	*322*	*355*	*320*	*329*	*327*	*284*	*299*	
	27–30	*440*	*397*	*394*	*374*	*364*	*346*	*408*	*362*	*327*	*330*	*318*	*333*	*322*	*321*	*285*	*303*	*288*	*265*	

Source. The Monitoring the Future study, the University of Michigan.

Notes. Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding. ' — ' indicates data not available.

[a] Answer alternatives were: (1) Don't disapprove, (2) Disapprove, and (3) Strongly disapprove. Percentages are shown for categories (2) and (3) combined.

[b] These questions were dropped from the questionnaires beginning in 2010.

TABLE 7-2
Trends in Friends' Use of Drugs as Estimated by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, 45, 50, and 55

Percentage saying friends use [a]

Q. How many of your friends would you estimate. . .

Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Take any illicit drug [b]																		
% saying any																		
18	87.5	85.4	86.3	82.6	81.0	82.4	82.2	81.7	79.1	76.9	71.0	69.1	67.3	71.0	78.3	78.6	80.6	83.4
19–22	90.2	88.0	86.8	85.0	82.3	82.9	80.5	76.7	77.2	78.4	72.7	71.5	66.8	71.7	71.6	71.6	76.2	77.2
23–26	—	—	—	—	83.6	82.7	80.3	80.9	74.4	73.8	65.8	63.0	67.3	64.6	66.7	65.3	64.6	67.0
27–30	—	—	—	—	—	—	—	—	74.8	72.9	69.6	67.1	61.5	60.2	57.1	58.5	59.1	60.9
35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	38.1	37.4	39.7	39.2
40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all																		
18	32.5	29.8	26.5	23.8	20.9	22.7	21.5	18.6	15.8	15.7	11.6	11.7	12.0	15.5	20.3	21.7	23.8	23.7
19–22	34.9	32.8	28.1	22.4	21.9	18.2	16.2	14.0	13.5	10.9	10.5	8.8	9.0	10.4	14.9	13.1	17.3	16.2
23–26	—	—	—	—	19.6	15.4	16.2	11.7	9.5	9.7	9.5	7.4	6.2	6.4	8.7	7.6	8.8	10.5
27–30	—	—	—	—	—	—	—	—	8.6	6.4	5.9	2.9	5.8	5.0	5.6	6.1	3.6	4.5
35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.1	1.9	2.0	3.0
40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take any illicit drug other than marijuana [b]																		
% saying any																		
18	62.4	63.3	64.7	61.2	61.3	61.8	63.3	62.4	56.5	56.2	50.1	46.3	47.1	48.7	53.7	53.7	54.5	55.1
19–22	67.9	67.8	66.7	65.2	60.8	62.1	61.0	57.3	53.5	60.8	53.4	51.5	45.3	51.4	46.3	46.4	46.5	49.7
23–26	—	—	—	—	63.7	64.0	59.0	61.1	55.1	54.2	47.8	41.8	46.1	42.3	39.4	40.3	32.8	35.1
27–30	—	—	—	—	—	—	—	—	55.9	55.0	49.7	47.2	37.7	38.5	33.9	37.7	36.4	33.9
35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	21.4	21.6	22.1	19.2
40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all																		
18	11.1	11.9	10.9	11.0	10.3	10.4	10.3	9.2	6.9	7.7	5.1	4.6	5.3	7.1	7.1	7.7	8.9	7.0
19–22	9.8	12.9	11.8	9.8	9.3	8.6	7.6	5.0	5.3	4.0	3.2	2.6	3.3	4.0	4.4	3.5	6.2	4.1
23–26	—	—	—	—	10.6	6.6	8.6	5.2	3.9	4.2	3.4	1.6	1.8	2.8	2.5	1.9	1.9	2.6
27–30	—	—	—	—	—	—	—	—	4.6	3.0	2.8	1.0	1.4	1.5	1.5	1.5	0.9	1.2
35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.8	0.5	0.7	0.5
40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Smoke marijuana																		
% saying any																		
18	86.4	83.0	84.4	80.3	77.7	79.5	79.2	78.4	75.3	72.5	68.3	65.8	63.1	67.4	75.6	76.1	78.0	81.4
19–22	88.8	86.4	85.2	83.8	81.6	81.1	78.5	75.3	75.1	73.8	67.6	68.0	63.5	67.6	67.4	68.8	74.9	74.7
23–26	—	—	—	—	82.0	80.8	77.7	79.4	71.6	69.8	61.8	59.6	61.3	61.2	62.6	63.2	62.6	63.5
27–30	—	—	—	—	—	—	—	—	71.8	68.2	65.1	62.6	58.0	57.4	52.3	55.7	55.1	58.3
35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	36.9	36.3	36.3	35.0
40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all																		
18	31.3	27.7	23.8	21.7	18.3	19.8	18.2	15.8	13.6	13.4	10.1	10.0	10.3	13.9	18.9	20.7	22.2	22.5
19–22	34.1	30.6	25.6	20.6	19.4	16.0	13.3	12.5	12.2	9.0	9.2	8.3	8.2	8.5	13.0	12.5	16.3	16.2
23–26	—	—	—	—	17.0	14.3	13.7	10.4	7.8	8.6	8.3	6.9	5.6	5.6	7.5	6.6	8.2	9.8
27–30	—	—	—	—	—	—	—	—	6.8	4.4	4.0	2.8	5.1	5.2	5.0	5.6	3.5	3.9
35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.0	2.5	2.9	2.9
40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

(Years Cont.)

(Table continued on next page.)

TABLE 7-2 (cont.)
Trends in Friends' Use of Drugs as Estimated by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, 45, 50, and 55

Q. How many of your friends would you estimate. . .	Age Group	Percentage saying friends use [a] 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Take any illicit drug [b,g]																				
% saying any	18	84.6	82.0	82.0	82.8	81.8	80.7	81.2	79.8	78.8	77.7	80.1	79.2	80.4	81.7	78.9	80.8	80.8	78.2	-2.5
	19–22	79.8	77.3	83.1	81.1	78.3	79.4	78.1	78.6	74.7	79.8	77.4	80.3	78.6	78.1	78.8	78.3	79.4	—	—
	23–26	67.6	67.9	67.8	66.9	73.4	70.8	70.8	74.2	72.2	71.3	72.2	74.5	75.7	80.3	74.2	76.9	78.5	—	—
	27–30	58.3	59.6	55.6	57.2	61.8	58.6	63.1	63.7	62.3	62.7	66.7	70.0	66.9	69.2	72.3	72.9	73.6	—	—
	35	38.4	36.3	37.7	39.1	40.9	37.5	37.9	40.0	40.4	42.1	44.9	44.4	45.0	50.8	49.0	52.7	55.3	55.9	+0.6
	40	39.2	38.2	38.0	38.4	36.2	36.5	34.6	36.2	35.4	34.6	35.9	39.0	37.3	36.6	40.3	42.1	42.0	44.0	+2.0
	45	—	—	—	—	—	37.8	38.3	34.3	36.7	38.5	35.9	36.1	37.7	36.2	39.2	39.5	41.3	39.6	-1.8
	50	—	—	—	—	—	—	—	—	—	—	39.3	37.0	36.5	36.0	38.4	39.1	39.8	41.1	+1.3
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	36.2	36.2	38.0	+1.9
% saying most or all	18	25.9	25.5	24.5	25.2	23.1	23.5	23.0	20.2	20.9	21.7	21.3	22.4	25.4	29.1	26.4	26.7	24.6	28.0	+3.4
	19–22	16.8	20.6	18.9	20.3	20.2	17.3	14.7	15.8	16.8	14.5	13.7	16.0	17.2	21.8	17.3	22.1	20.5	—	—
	23–26	9.6	8.4	9.7	10.4	10.3	10.3	11.7	9.7	11.1	8.1	8.9	12.7	13.9	10.5	9.1	13.6	15.3	—	—
	27–30	5.3	5.7	5.3	7.1	6.9	6.9	3.9	4.7	5.4	6.5	6.3	6.4	6.6	7.1	6.8	6.7	8.3	—	—
	35	3.1	2.8	3.1	3.2	2.9	3.2	2.8	2.5	2.1	2.2	2.2	2.5	3.7	4.5	3.3	4.7	5.1	6.4	+1.3
	40	2.3	2.0	2.0	1.6	2.2	1.6	1.6	2.1	2.5	2.0	1.3	1.3	2.1	1.9	1.2	2.3	3.3	3.4	+0.2
	45	—	—	—	—	—	2.2	1.5	1.4	1.7	1.3	1.3	1.2	1.5	1.2	1.0	1.5	1.9	1.6	-0.4
	50	—	—	—	—	—	—	—	—	—	—	1.4	1.4	1.4	1.8	1.8	1.0	1.4	1.9	+0.5
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.0	0.9	2.2	+1.3 s
Take any illicit drug other than marijuana [b]																				
% saying any	18	55.6	51.2	52.5	55.0	54.3	50.0	51.4	51.3	51.0	50.0	49.3	49.4	53.7	49.9	48.9	45.4	43.7	41.2	-2.5
	19–22	53.3	54.8	56.1	60.0	57.2	50.8	53.4	54.9	49.5	52.5	46.4	47.5	52.0	52.0	49.3	52.4	50.3	—	—
	23–26	35.4	41.1	42.5	42.6	49.4	42.3	47.1	46.6	45.6	42.6	45.9	44.4	52.4	50.5	46.6	45.3	53.3	—	—
	27–30	34.1	35.2	31.7	33.5	36.0	34.7	35.8	33.1	36.2	34.2	36.4	41.6	40.1	40.9	50.1	44.6	48.2	—	—
	35	19.3	19.0	17.9	18.7	20.4	18.5	20.2	18.5	18.1	20.7	23.7	20.2	23.9	26.4	25.7	25.2	26.5	27.2	+0.6
	40	20.9	21.0	21.9	21.4	21.0	20.2	18.5	21.0	20.3	20.3	19.8	20.6	18.8	17.4	20.2	18.7	17.9	21.3	+3.4
	45	—	—	—	—	—	23.4	25.1	20.8	22.7	25.0	21.2	20.7	20.9	21.5	22.6	20.9	19.7	18.3	-1.4
	50	—	—	—	—	—	—	—	—	—	—	24.5	24.8	21.7	22.8	22.2	20.1	21.3	20.5	-0.8
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19.9	19.0	21.0	+2.1
% saying most or all	18	8.9	7.4	7.4	7.0	6.1	6.7	7.3	6.7	5.3	6.5	5.3	5.6	7.1	6.5	5.5	4.3	5.1	6.0	+0.9
	19–22	4.3	5.1	7.7	8.0	5.7	5.1	3.5	4.8	4.2	3.9	3.4	3.6	4.8	7.4	4.6	6.6	5.5	—	—
	23–26	2.8	2.2	3.8	3.7	2.8	3.7	3.1	3.2	3.2	1.0	1.5	2.9	3.2	3.1	3.2	3.3	5.3	—	—
	27–30	0.9	1.3	1.5	2.6	2.3	0.7	0.8	0.9	1.4	2.2	2.5	1.7	1.5	2.5	1.5	0.7	1.6	—	—
	35	0.7	0.9	1.0	0.9	0.6	0.6	0.4	0.5	0.5	0.6	0.5	0.5	1.0	0.7	0.8	1.3	0.9	1.2	+0.3
	40	0.4	0.8	0.7	0.5	0.3	0.3	0.2	0.5	0.7	0.6	0.7	0.3	*	0.2	0.1	0.2	0.4	0.6	+0.2
	45	—	—	—	—	—	0.7	0.7	0.4	0.9	0.5	0.5	0.3	0.3	0.1	0.2	0.4	0.5	0.2	-0.3
	50	—	—	—	—	—	—	—	—	—	—	0.5	0.4	0.3	0.8	0.4	0.2	0.3	0.3	0.0
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.4	0.4	0.4	0.0
Smoke marijuana																				
% saying any	18	83.2	80.7	80.5	81.2	79.4	78.9	79.5	77.4	76.4	74.8	78.2	77.2	79.7	80.6	77.7	80.2	79.3	76.9	-2.3
	19–22	77.2	73.9	81.2	78.4	77.2	76.5	75.6	75.8	72.0	76.6	74.7	77.7	75.6	74.7	76.8	76.2	77.5	78.4	+1.0
	23–26	65.0	64.4	64.8	64.5	68.8	67.7	68.4	70.7	67.6	69.0	67.7	71.7	71.9	77.5	71.5	73.4	74.7	74.6	0.0
	27–30	55.5	57.0	51.7	56.5	59.0	55.8	60.4	60.8	61.0	60.2	64.2	65.2	62.3	65.9	66.6	69.2	69.4	76.2	+6.8
	35	34.6	33.3	34.9	35.6	37.4	32.9	34.7	37.2	37.3	38.6	42.1	40.6	41.3	47.4	45.1	48.8	54.0	53.4	-0.6
	40	34.6	32.5	32.3	31.8	31.4	30.7	29.9	30.4	29.4	29.2	29.6	33.6	32.1	32.4	35.8	38.0	38.2	39.4	+1.3
	45	—	—	—	—	—	31.1	29.4	26.3	28.4	30.0	28.6	29.4	32.6	30.3	33.0	34.5	36.4	34.8	-1.7
	50	—	—	—	—	—	—	—	—	—	—	30.1	26.9	28.0	27.9	31.3	33.0	34.0	36.2	+2.3
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	29.5	28.9	31.6	+2.7
% saying most or all	18	23.8	24.2	23.2	24.0	21.4	21.7	21.1	17.9	19.6	19.2	19.9	20.9	23.6	27.3	25.0	25.7	23.4	25.9	+2.6
	19–22	16.4	19.4	16.6	18.5	18.6	16.0	15.0	13.4	15.7	13.4	11.5	14.5	15.4	19.1	16.2	19.7	18.3	23.1	+4.7
	23–26	9.0	8.5	8.2	9.0	8.7	9.3	9.8	8.0	10.1	7.9	8.5	12.2	12.3	9.6	8.3	12.8	13.7	17.1	+3.3
	27–30	4.8	5.5	4.9	6.3	6.2	6.7	3.5	4.3	5.0	6.6	5.0	5.8	6.3	5.8	5.6	6.6	7.8	7.4	-0.4
	35	2.8	2.6	2.8	2.6	2.7	3.1	2.7	2.3	2.0	2.1	1.9	2.3	3.4	4.2	2.9	4.3	4.9	6.2	+1.3
	40	2.1	1.4	1.9	1.2	2.0	1.4	1.6	1.8	2.1	1.6	0.9	1.2	2.1	1.7	1.2	2.1	3.1	3.1	0.0
	45	—	—	—	—	—	1.9	0.9	1.3	1.1	1.0	1.0	1.1	1.3	1.1	0.9	1.3	1.6	1.5	-0.1
	50	—	—	—	—	—	—	—	—	—	—	1.2	1.2	1.2	1.3	1.5	1.0	1.2	1.6	+0.4
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.8	0.7	1.9	+1.1 s

↓
(List of drugs continued.)

TABLE 7-2 (cont.)
Trends in Friends' Use of Drugs as Estimated by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, 45, 50, and 55

Percentage saying friends use [a]

Q. How many of your friends would you estimate. . .		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Use inhalants																			
% saying any	18	17.8	16.5	18.4	16.1	19.3	21.2	22.4	24.7	20.8	22.1	20.0	19.2	22.2	23.7	26.5	27.5	27.2	27.4
	19–22	11.9	13.2	13.8	12.3	11.7	9.6	10.9	12.7	10.9	11.7	13.0	12.2	12.6	13.8	14.0	14.2	16.2	13.7
	23–26	—	—	—	—	7.7	6.7	7.2	6.1	6.2	5.9	6.1	4.4	5.1	6.3	7.0	9.3	5.6	7.5
	27–30	—	—	—	—	—	—	—	—	4.6	3.5	2.9	2.5	3.3	2.9	3.5	4.0	4.1	3.6
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	1.2	0.9	1.3	1.1	1.1	1.5	2.0	1.9	1.2	1.9	1.0	0.7	1.8	1.8	2.0	2.0	2.4	1.9
	19–22	0.5	0.4	0.7	0.3	0.5	0.6	0.7	0.7	0.7	0.4	0.6	0.2	0.8	0.7	0.7	0.6	1.1	0.7
	23–26	—	—	—	—	0.6	0.2	0.6	0.1	0.2	0.4	0.4	0.1	*	0.1	0.2	0.7	0.5	0.8
	27–30	—	—	—	—	—	—	—	—	0.3	*	0.2	0.2	*	0.2	*	*	*	*
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Use nitrites																			
% saying any	18	19.0	17.4	17.5	14.5	15.0	15.6	18.0	18.3	13.6	13.3	10.4	8.9	9.0	10.7	10.0	10.7	11.2	11.9
	19–22	18.4	16.0	14.2	13.8	8.9	9.9	11.7	13.2	10.2	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	10.8	7.8	8.0	7.9	5.2	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	6.6	—	—	—	—	—	—	—	—	—
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	1.3	1.2	0.9	0.7	1.2	1.0	1.2	1.3	0.7	0.9	0.6	0.4	0.7	0.7	0.8	0.8	0.8	0.7
	19–22	0.3	0.4	0.9	0.6	0.6	0.6	0.4	0.4	0.2	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	0.8	0.3	0.4	0.3	0.1	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take LSD																			
% saying any	18	28.1	28.5	27.8	24.0	23.9	24.4	24.5	25.3	24.1	25.2	25.0	23.4	28.1	31.3	34.1	36.9	37.9	36.5
	19–22	30.9	25.9	26.5	22.6	21.6	18.8	18.7	18.2	19.0	20.1	20.1	22.0	22.2	28.8	23.8	26.9	28.6	24.7
	23–26	—	—	—	—	21.5	17.2	15.4	15.9	13.3	14.1	12.3	12.5	15.0	17.2	17.3	21.5	15.3	18.2
	27–30	—	—	—	—	—	—	—	—	10.4	7.7	9.1	8.6	10.9	8.7	8.1	12.0	11.6	12.3
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	1.8	2.2	2.4	1.4	2.0	1.5	1.8	1.6	1.5	2.4	1.9	1.7	2.4	3.8	4.2	4.8	5.0	3.7
	19–22	1.2	0.8	0.9	1.0	0.6	0.8	0.9	0.6	1.3	0.4	1.2	1.4	1.9	2.1	2.5	2.3	3.8	1.4
	23–26	—	—	—	—	0.8	0.5	1.0	0.2	0.6	0.5	0.6	0.2	0.4	0.7	1.1	0.7	0.7	0.6
	27–30	—	—	—	—	—	—	—	—	0.3	0.2	0.3	0.3	*	0.3	0.4	0.3	0.4	0.4
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

(Years Cont.)

(Table continued on next page.)

TABLE 7-2 (cont.)
Trends in Friends' Use of Drugs as Estimated by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, 45, 50, and 55

Q. How many of your friends would you estimate. . .	Age Group	Percentage saying friends use [a]																		2014–2015 change
		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	
Use inhalants																				
% saying any	18	25.9	21.6	23.5	22.2	21.0	17.5	17.9	18.1	18.9	17.9	18.0	18.0	19.0	16.4	12.3	12.1	9.4	8.7	-0.7
	19–22	16.2	16.3	13.7	13.7	10.4	10.0	9.5	11.1	11.0	9.6	7.4	6.6	8.3	11.9	8.2	7.3	5.5	7.5	+2.0
	23–26	6.2	7.9	6.9	7.5	7.4	7.9	6.2	5.8	5.2	3.7	6.1	6.5	6.0	4.8	5.4	4.1	4.4	2.7	-1.7
	27–30	3.8	4.2	3.6	6.0	4.5	3.2	2.6	3.2	3.3	2.8	2.7	3.6	1.7	3.2	3.8	2.9	5.4	1.7	-3.6 s
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	2.7	1.8	1.4	1.4	1.2	1.1	1.2	2.0	1.2	1.6	1.1	0.9	1.8	1.4	0.9	1.1	0.7	0.8	+0.1
	19–22	1.3	0.8	0.6	1.2	0.4	0.6	*	0.1	0.5	0.3	0.6	*	0.6	0.6	0.1	0.9	*	0.5	+0.5
	23–26	*	0.1	0.7	0.1	0.4	0.3	*	0.1	0.3	*	*	*	0.1	0.1	*	0.3	0.3	*	-0.3
	27–30	*	*	*	0.3	0.3	*	*	*	*	*	0.3	0.3	*	0.3	*	0.1	0.5	*	-0.5
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Use nitrites																				
% saying any	18	12.9	10.9	11.0	11.9	11.2	8.5	9.4	9.1	8.1	7.7	7.3	7.7	—	—	—	—	—	—	—
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	1.0	0.7	1.0	0.6	0.8	1.0	1.2	1.0	0.5	0.7	0.5	0.2	—	—	—	—	—	—	—
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take LSD																				
% saying any	18	36.8	32.2	31.9	32.2	28.6	21.9	23.5	19.5	18.7	18.3	20.9	21.3	22.3	22.5	21.3	17.7	18.0	18.9	+0.9
	19–22	29.4	28.2	27.8	28.4	24.0	15.4	15.9	13.9	14.2	15.1	12.5	12.8	16.0	18.0	15.7	23.3	17.1	22.0	+5.0
	23–26	15.2	18.1	19.3	16.8	15.8	16.1	14.4	12.0	11.7	11.2	9.2	11.0	11.9	10.2	11.5	13.4	16.7	16.8	+0.1
	27–30	12.6	13.4	11.8	12.5	13.1	11.4	8.9	6.6	9.1	7.6	8.8	7.6	8.2	7.6	7.7	10.6	9.7	8.4	-1.3
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	4.7	3.9	3.1	2.9	1.7	1.9	1.5	1.5	0.8	1.2	1.1	1.1	1.5	1.4	1.3	1.2	1.2	1.6	+0.4
	19–22	2.5	1.8	2.1	2.7	1.6	0.8	0.3	0.3	0.2	0.8	0.2	0.3	1.4	0.7	1.0	1.0	0.9	1.8	+0.9
	23–26	1.0	1.5	0.9	0.3	0.4	0.8	0.4	0.2	0.3	*	0.1	0.5	0.1	0.6	0.4	0.3	0.6	0.4	-0.3
	27–30	0.1	0.6	0.4	0.4	0.3	0.1	*	0.3	0.4	0.4	*	0.5	0.2	0.1	*	*	0.3	*	-0.3
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

(List of drugs continued.)

TABLE 7-2 (cont.)
Trends in Friends' Use of Drugs as Estimated by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, 45, 50, and 55

Percentage saying friends use [a]

Q. How many of your friends would you estimate. . .	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Take other hallucinogens [c]																			
% saying any	18	28.2	26.3	25.6	22.1	21.3	22.0	22.3	21.7	17.8	18.1	15.9	15.1	17.0	19.3	21.4	23.8	26.4	26.3
	19–22	33.4	25.5	25.1	21.0	20.2	16.6	15.8	15.0	16.1	13.9	15.3	14.2	12.0	15.0	13.8	14.9	17.2	17.2
	23–26	—	—	—	—	20.0	16.7	13.2	13.2	11.7	9.6	8.7	8.5	9.8	9.4	10.3	11.7	10.4	13.0
	27–30	—	—	—	—	—	—	—	—	10.6	7.4	7.1	6.8	7.9	7.1	6.6	7.9	7.5	6.8
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	2.2	2.1	1.9	1.6	1.9	1.4	1.3	1.2	0.9	1.4	1.0	0.8	1.0	1.7	2.2	2.2	2.3	2.6
	19–22	1.5	0.9	1.1	1.2	0.7	1.0	0.7	0.6	0.9	0.2	0.5	0.8	0.7	0.9	1.6	1.5	1.0	1.1
	23–26	—	—	—	—	0.8	0.3	0.5	0.3	0.2	0.3	0.8	0.1	0.4	0.7	0.6	0.8	0.1	0.8
	27–30	—	—	—	—	—	—	—	—	0.2	0.1	0.3	0.2	*	0.2	0.3	0.1	0.2	0.3
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take PCP																			
% saying any	18	22.2	17.2	17.3	14.2	14.2	15.9	16.1	15.5	13.5	14.7	13.0	12.0	12.7	15.6	15.5	18.3	20.3	19.7
	19–22	24.1	15.3	15.3	12.6	9.5	8.9	10.1	9.7	10.1	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	11.6	6.8	7.4	6.9	5.1	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	6.7	—	—	—	—	—	—	—	—	—
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	1.6	0.9	0.9	1.1	1.1	1.2	1.2	1.1	0.8	1.2	0.5	0.5	0.9	1.9	1.2	1.2	1.3	1.4
	19–22	0.5	0.3	0.3	0.5	0.7	0.7	0.2	0.1	0.3	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	0.6	*	0.4	*	0.2	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	0.4	—	—	—	—	—	—	—	—	—
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take ecstasy (MDMA)																			
% saying any	18	—	—	—	—	—	—	—	—	—	—	12.4	11.9	10.7	12.8	15.9	20.7	24.2	27.7
	19–22	—	—	—	—	—	—	—	—	—	16.3	14.3	12.0	12.9	13.7	11.3	17.2	20.7	21.4
	23–26	—	—	—	—	—	—	—	—	—	7.6	9.0	9.5	11.0	9.8	11.4	11.2	11.3	15.1
	27–30	—	—	—	—	—	—	—	—	—	5.6	6.3	5.4	4.6	6.6	5.8	6.9	10.1	7.4
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	—	—	—	—	—	—	—	—	—	—	2.2	1.7	2.1	1.2	1.7	2.8	3.0	2.6
	19–22	—	—	—	—	—	—	—	—	—	0.4	0.7	0.2	0.7	0.7	0.5	0.5	0.8	1.7
	23–26	—	—	—	—	—	—	—	—	—	0.5	0.2	0.1	0.1	0.5	0.1	0.4	0.1	0.8
	27–30	—	—	—	—	—	—	—	—	—	0.5	0.3	*	0.1	0.3	0.2	0.5	0.1	0.3
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

(Years Cont.)

(Table continued on next page.)

TABLE 7-2 (cont.)
Trends in Friends' Use of Drugs as Estimated by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, 45, 50, and 55

Percentage saying friends use [a]

Q. How many of your friends would you estimate. . .	Age Group	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Take other hallucinogens [c]	18	27.4	22.5	24.0	35.4	33.6	30.1	31.9	31.0	30.1	30.1	29.4	30.5	32.3	31.8	29.5	26.9	22.0	22.1	+0.1
% saying any	19–22	19.1	18.9	20.9	33.6	33.5	24.8	26.8	25.1	27.8	26.7	21.9	21.8	26.4	26.4	22.6	28.3	19.9	27.1	+7.2 s
	23–26	11.7	9.6	11.3	18.6	22.4	20.2	24.5	18.5	18.9	15.9	21.1	19.6	22.6	16.5	17.5	17.4	25.5	20.3	-5.2
	27–30	7.8	9.4	8.0	14.6	14.9	13.5	12.4	9.4	14.9	10.6	16.9	12.1	14.9	13.9	17.1	16.5	15.6	18.8	+3.2
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	3.1	2.4	2.4	2.9	2.3	2.4	2.6	2.2	1.7	1.7	1.8	1.6	2.0	2.1	2.0	1.6	1.6	1.7	+0.1
	19–22	1.7	0.8	2.0	2.3	2.2	1.5	1.1	0.6	0.9	1.0	1.3	0.6	0.9	0.7	0.8	1.0	1.0	1.3	+0.3
	23–26	0.7	0.8	0.3	0.6	0.7	1.0	0.8	0.7	1.0	0.4	0.4	1.2	0.2	0.7	0.5	1.2	1.1	0.5	-0.6
	27–30	0.2	0.2	0.4	0.6	1.0	0.1	*	0.4	0.4	0.4	0.4	0.6	0.7	0.5	0.3	0.4	0.1	*	-0.1
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take PCP																				
% saying any	18	20.2	16.8	17.5	19.1	17.2	13.6	11.8	10.1	10.6	9.4	9.4	9.3	—	—	—	—	—	—	—
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	1.6	1.5	1.7	1.3	1.0	1.5	1.1	1.0	0.5	0.8	0.5	0.5	—	—	—	—	—	—	—
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take ecstasy (MDMA)																				
% saying any	18	24.5	26.7	37.3	41.9	38.0	34.2	28.9	23.1	23.0	23.6	24.7	23.5	25.9	27.5	26.8	25.6	24.3	26.3	+2.0
	19–22	26.0	30.7	42.4	43.3	43.4	31.3	27.6	28.3	25.2	21.6	19.3	24.4	20.4	22.0	18.9	27.4	19.9	—	—
	23–26	13.7	15.2	25.9	29.4	36.8	27.0	31.2	25.3	23.4	16.5	20.8	19.7	20.7	19.5	18.8	19.1	22.7	—	—
	27–30	8.5	12.4	13.1	17.8	20.6	19.4	20.6	15.6	22.6	15.9	17.8	17.0	12.7	10.6	15.8	13.5	17.7	—	—
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	2.5	2.7	4.8	5.2	3.7	2.7	3.2	2.5	1.9	2.1	2.4	2.2	2.1	2.7	2.7	1.8	2.3	2.0	-0.3
	19–22	2.0	2.9	4.9	5.8	2.7	1.9	1.9	1.1	0.7	0.8	0.9	1.6	1.3	2.9	1.2	2.0	1.5	—	—
	23–26	0.8	0.4	2.9	1.7	1.2	2.0	1.1	1.3	0.9	0.3	0.4	0.7	0.6	0.4	1.7	1.0	2.2	—	—
	27–30	*	0.8	0.4	0.3	0.9	0.5	0.6	0.2	*	0.1	0.9	0.7	0.1	0.5	0.3	0.1	0.8	—	—
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

(List of drugs continued.)

TABLE 7-2 (cont.)
Trends in Friends' Use of Drugs as Estimated by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, 45, 50, and 55

Percentage saying friends use [a]

Q. How many of your friends would you estimate. . .	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Take cocaine																			
% saying any	18	41.6	40.1	40.7	37.6	38.9	43.8	45.6	43.7	37.7	37.4	31.7	26.8	26.3	24.5	26.1	24.8	28.1	28.2
	19–22	51.0	48.9	49.8	46.5	47.6	45.9	48.3	45.7	42.0	42.7	33.2	29.7	22.8	24.3	21.5	22.0	19.4	22.2
	23–26	—	—	—	—	52.4	53.2	51.6	50.7	47.1	40.8	34.8	29.0	28.8	27.1	22.3	24.4	18.1	19.7
	27–30	—	—	—	—	—	—	—	—	47.9	43.3	38.3	35.7	29.9	27.6	22.6	26.2	20.8	21.5
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	6.1	6.3	4.9	5.1	5.1	5.8	6.2	5.1	3.4	3.7	2.1	1.5	1.5	2.1	1.5	2.0	2.2	2.0
	19–22	7.0	8.6	7.8	6.1	6.3	6.1	6.1	3.3	3.5	2.1	1.2	1.1	1.0	0.5	1.5	0.9	1.0	0.8
	23–26	—	—	—	—	9.1	5.3	7.0	4.1	3.1	2.7	2.1	0.6	0.9	0.8	1.0	0.3	0.4	1.1
	27–30	—	—	—	—	—	—	—	—	3.8	2.0	2.3	0.9	1.2	0.8	0.8	0.4	0.4	0.6
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take crack																			
% saying any	18	—	—	—	—	—	—	—	27.4	25.4	26.1	19.2	17.6	17.8	17.9	20.0	19.2	21.6	22.2
	19–22	—	—	—	—	—	—	—	23.8	21.8	20.6	14.6	14.3	11.8	13.6	13.8	14.0	9.4	13.1
	23–26	—	—	—	—	—	—	—	26.4	22.4	19.8	14.4	10.8	10.8	8.8	8.8	11.1	8.2	8.3
	27–30	—	—	—	—	—	—	—	—	22.1	18.4	16.6	11.6	10.3	10.2	10.4	10.3	8.6	6.3
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.5	5.1	4.4	3.1
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	—	—	—	—	—	—	—	2.2	1.1	2.1	0.6	0.6	0.7	0.9	1.0	1.1	0.9	1.1
	19–22	—	—	—	—	—	—	—	0.7	0.8	1.0	0.6	0.2	0.1	0.3	0.4	0.3	0.5	0.3
	23–26	—	—	—	—	—	—	—	0.8	0.9	0.8	0.5	0.1	0.1	0.5	0.2	*	0.3	0.5
	27–30	—	—	—	—	—	—	—	—	1.2	0.9	0.9	0.3	*	0.6	0.3	0.1	0.2	0.2
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.6	0.3	0.4	*
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take cocaine powder																			
% saying any	18	—	—	—	—	—	—	—	—	—	25.3	24.6	19.8	19.7	18.1	20.7	19.2	22.8	24.8
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.2	12.9	15.4	11.1
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	—	—	—	—	—	—	—	—	—	2.3	2.5	1.8	2.0	1.6	1.9	1.7	1.9	2.0
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.8	0.3	0.6	0.4
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

(Years Cont.)

(Table continued on next page.)

TABLE 7-2 (cont.)
Trends in Friends' Use of Drugs as Estimated by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, 45, 50, and 55

Q. How many of your friends would you estimate. . .	Age Group	Percentage saying friends use [a] 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Take cocaine																				
% saying any	18	31.2	27.8	27.2	27.1	26.8	23.8	29.3	28.1	29.7	29.7	25.2	24.0	22.9	18.8	18.1	18.8	17.9	18.3	+0.4
	19–22	26.8	25.7	24.8	27.4	28.2	25.5	26.2	27.2	26.6	29.4	21.8	21.2	21.8	22.3	15.9	19.5	20.5	21.4	+1.0
	23–26	18.7	20.1	20.3	19.4	23.7	21.9	27.4	25.6	24.6	23.1	23.1	23.5	28.0	23.7	21.6	18.9	20.3	22.0	+1.6
	27–30	18.6	20.7	16.5	19.7	16.0	17.0	17.0	17.9	19.5	18.6	20.7	22.1	19.2	16.1	21.6	18.4	20.8	24.7	+4.0
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	3.2	2.9	2.0	1.7	1.7	2.4	2.3	2.3	1.9	2.1	1.2	1.8	1.4	1.0	0.8	1.1	0.8	1.5	+0.8 s
	19–22	1.5	1.1	1.0	1.8	1.0	1.4	0.7	2.1	1.0	1.1	1.3	0.5	0.2	0.5	0.3	0.9	0.6	1.1	+0.5
	23–26	0.9	0.5	0.8	1.6	1.0	1.6	1.0	1.5	1.4	0.8	0.6	1.7	0.9	0.4	0.6	0.9	1.1	1.0	-0.1
	27–30	0.1	0.4	0.4	0.5	0.6	0.3	0.3	*	*	1.4	0.9	0.7	0.2	0.5	0.6	0.5	0.4	0.4	0.0
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take crack																				
% saying any	18	24.4	19.0	21.4	23.4	21.5	18.7	22.5	22.9	22.3	21.8	19.1	18.8	15.2	12.1	10.4	10.3	9.0	10.1	+1.1
	19–22	16.4	15.7	16.5	17.4	18.0	11.8	16.0	14.9	14.5	16.0	12.2	11.3	7.2	8.3	5.1	8.3	6.9	—	—
	23–26	8.3	8.8	7.9	8.6	10.1	10.4	10.8	10.8	10.0	8.7	9.8	8.5	7.0	6.7	6.5	7.5	5.0	—	—
	27–30	6.4	8.7	6.0	7.1	6.4	6.5	5.2	8.5	9.1	6.9	5.8	9.5	3.6	4.2	3.6	4.6	4.2	—	—
	35	2.8	3.2	3.9	2.8	3.2	2.8	3.1	2.6	2.8	3.0	2.8	2.5	3.4	2.1	1.3	2.9	3.5	3.4	-0.2
	40	3.8	3.0	2.9	3.5	2.6	2.7	2.6	2.8	2.3	3.1	1.9	1.2	1.5	1.2	1.2	1.2	2.1	1.9	-0.2
	45	—	—	—	—	—	3.7	3.3	2.4	3.0	2.9	1.8	2.3	2.2	1.8	1.6	2.1	1.2	1.0	-0.2
	50	—	—	—	—	—	—	—	—	—	—	2.0	1.6	1.8	1.4	1.1	1.2	1.9	1.3	-0.6
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.1	1.2	1.1	-0.1
% saying most or all	18	1.7	1.5	1.4	0.8	0.8	1.4	1.6	1.6	1.0	1.3	1.1	1.1	1.5	0.9	0.8	0.9	0.8	1.0	+0.2
	19–22	0.9	0.9	0.5	0.3	0.2	0.4	0.1	1.0	0.8	0.3	0.4	0.3	*	0.3	0.3	0.6	0.1	—	—
	23–26	0.4	*	0.5	0.3	*	0.3	0.5	0.2	0.7	0.1	0.3	*	0.4	0.1	*	0.3	0.1	—	—
	27–30	0.1	*	*	*	0.3	0.1	*	0.1	*	0.3	0.6	0.3	*	*	*	0.5	*	—	—
	35	0.1	0.3	0.5	0.2	0.3	0.3	0.1	0.2	0.2	0.2	*	0.1	0.3	*	0.1	*	*	0.3	+0.3
	40	*	0.2	0.2	0.1	*	*	*	0.1	0.2	0.1	0.0	*	*	*	*	0.1	*	0.3	+0.3
	45	—	—	—	—	—	0.4	0.3	0.2	0.2	*	*	0.1	*	*	0.1	0.1	0.2	*	-0.2
	50	—	—	—	—	—	—	—	—	—	—	0.2	0.1	0.2	0.1	0.0	0.2	0.1	*	-0.1
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.2	0.0	0.2	+0.2
Take cocaine powder																				
% saying any	18	22.9	22.0	21.3	20.1	22.4	23.2	25.4	23.2	22.8	22.3	22.6	19.1	17.6	15.9	17.4	15.6	15.4	14.7	-0.7
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	35	10.4	10.0	10.3	9.4	9.4	8.2	9.2	8.3	8.4	9.1	11.4	8.7	10.5	12.8	9.0	11.6	12.8	13.2	+0.4
	40	10.8	8.9	8.8	8.8	8.5	7.6	7.6	8.9	7.3	6.7	6.2	6.5	4.9	4.8	5.2	6.6	6.6	6.2	-0.4
	45	—	—	—	—	—	8.3	8.0	7.0	7.4	8.0	6.7	6.4	5.9	5.8	6.0	6.0	5.2	4.6	-0.6
	50	—	—	—	—	—	—	—	—	—	—	6.0	5.4	5.3	4.9	4.9	4.4	4.6	5.1	+0.5
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.1	3.0	3.8	—
% saying most or all	18	1.9	1.9	1.8	1.5	1.9	1.9	3.3	1.7	1.7	1.8	1.5	1.5	1.0	1.6	1.5	1.2	1.8	1.2	-0.6
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	35	0.4	0.6	0.7	0.4	0.4	0.4	0.2	0.2	0.2	0.4	0.2	0.2	0.4	0.0	0.1	0.7	0.1	0.8	+0.7 s
	40	0.2	0.2	*	0.2	0.1	0.1	0.1	0.2	0.5	0.2	0.2	0.1	*	*	*	*	*	0.3	+0.3
	45	—	—	—	—	—	0.5	0.5	0.2	0.4	0.1	0.1	*	*	*	0.1	0.3	0.2	*	-0.2
	50	—	—	—	—	—	—	—	—	—	—	0.2	0.2	0.2	0.0	0.0	0.1	0.2	*	-0.1
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.2	0.1	0.2	+0.1

(List of drugs continued.)

TABLE 7-2 (cont.)
Trends in Friends' Use of Drugs as Estimated by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, 45, 50, and 55

Percentage saying friends use [a]

Q. How many of your friends would you estimate. . .	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Take heroin																			
% saying any	18	13.0	12.5	13.2	12.0	13.0	14.5	15.3	13.9	12.4	14.0	11.4	11.4	13.2	13.3	14.3	14.5	15.6	15.6
	19–22	11.0	8.1	9.4	7.5	7.1	6.5	8.5	8.5	7.8	6.8	6.5	6.1	4.7	7.0	8.1	10.4	6.7	7.4
	23–26	—	—	—	—	6.1	4.4	4.3	6.5	3.6	5.2	4.2	3.6	3.8	4.5	4.9	5.8	4.0	6.2
	27–30	—	—	—	—	—	—	—	—	3.8	2.8	4.5	2.7	3.1	3.6	4.2	3.6	4.4	4.2
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	1.0	0.5	0.7	0.8	0.8	0.9	1.1	0.9	0.7	1.1	0.4	0.4	0.7	1.1	1.0	1.1	0.9	0.8
	19–22	0.3	0.5	0.1	0.2	0.4	0.6	0.2	0.3	0.2	0.2	0.3	0.2	0.1	0.2	0.4	0.4	0.4	0.2
	23–26	—	—	—	—	0.4	0.2	0.2	*	0.2	0.4	0.2	0.3	0.4	0.1	0.2	0.2	*	0.7
	27–30	—	—	—	—	—	—	—	—	0.2	0.1	0.2	0.2	*	0.2	0.3	*	*	*
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take other narcotics [d]																			
% saying any	18	22.4	23.1	23.9	20.8	21.4	22.8	21.8	23.2	19.2	19.2	17.2	13.7	14.9	16.1	18.5	19.5	21.8	22.2
	19–22	22.8	20.4	21.9	17.9	17.4	16.9	14.6	15.4	14.1	15.0	12.9	14.1	10.8	13.2	10.5	15.9	13.4	13.2
	23–26	—	—	—	—	16.0	14.9	14.0	13.0	10.6	10.8	10.5	8.5	8.4	8.7	8.0	10.5	8.9	9.9
	27–30	—	—	—	—	—	—	—	—	12.1	8.6	9.1	9.3	7.5	8.2	8.0	7.7	9.5	7.9
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	1.7	1.5	1.4	1.4	1.6	1.4	1.8	1.4	1.2	1.4	0.9	0.5	1.1	1.2	1.0	1.6	1.5	1.4
	19–22	0.9	0.7	0.6	0.5	0.8	1.0	0.5	0.4	0.9	0.1	0.6	0.4	0.5	0.6	0.6	0.6	0.4	0.4
	23–26	—	—	—	—	0.4	0.3	0.7	*	0.3	0.2	0.2	*	*	*	0.3	0.2	*	0.6
	27–30	—	—	—	—	—	—	—	—	0.3	*	0.2	0.2	0.1	0.2	0.2	*	0.2	*
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take amphetamines [e]																			
% saying any	18	43.9	48.8	50.6	46.1	45.1	43.3	41.8	39.5	33.4	33.5	28.7	24.3	24.3	27.5	28.1	30.3	32.2	32.7
	19–22	54.1	52.2	51.3	49.7	46.1	42.1	38.5	34.5	26.8	29.6	23.3	26.2	19.5	21.0	20.9	21.7	21.6	21.1
	23–26	—	—	—	—	45.6	40.1	33.5	32.1	28.4	23.1	20.6	17.1	15.1	16.8	16.2	18.2	12.5	14.4
	27–30	—	—	—	—	—	—	—	—	26.1	21.6	19.3	17.0	15.3	14.0	13.1	13.7	15.5	12.9
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	4.8	6.4	5.4	5.1	4.5	3.4	3.4	2.6	1.9	2.6	1.9	1.3	1.3	2.0	1.8	2.0	2.8	2.4
	19–22	3.8	5.7	4.6	3.8	3.3	2.9	1.3	1.9	1.4	0.7	1.0	0.6	0.9	0.2	1.1	1.2	0.7	0.7
	23–26	—	—	—	—	1.9	1.8	1.7	1.2	0.3	0.6	0.7	0.8	0.4	1.5	0.9	0.5	0.2	0.8
	27–30	—	—	—	—	—	—	—	—	0.6	0.4	0.5	0.5	0.1	0.5	0.5	0.3	0.3	0.1
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

(Years Cont.)

(Table continued on next page.)

TABLE 7-2 (cont.)
Trends in Friends' Use of Drugs as Estimated by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, 45, 50, and 55

Q. How many of your friends would you estimate. . .	Age Group	Percentage saying friends use [a]																		2014–2015 change
		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	
Take heroin																				
% saying any	18	16.5	12.7	14.9	13.1	12.9	10.3	12.7	13.1	12.7	12.9	11.2	12.7	12.4	10.2	7.7	8.5	7.9	7.1	-0.8
	19–22	9.4	9.7	7.7	8.7	8.9	5.3	7.0	6.4	7.5	9.0	6.4	3.9	5.3	6.2	6.4	4.8	4.6	5.6	+1.0
	23–26	5.8	4.8	4.7	5.0	5.2	6.1	2.9	5.1	3.5	4.3	3.1	5.9	6.9	3.9	5.9	4.6	3.9	3.0	-0.9
	27–30	3.5	3.8	2.8	4.3	3.9	3.4	3.0	3.8	2.5	3.0	2.1	3.9	3.3	2.6	3.5	4.6	3.3	4.9	+1.6
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	1.3	1.0	1.1	0.9	0.7	0.9	0.9	1.1	0.8	1.4	0.7	0.9	1.3	0.6	0.6	0.6	0.5	0.7	+0.1
	19–22	0.5	0.1	0.3	0.6	*	0.3	*	0.3	0.4	0.3	0.6	*	*	0.5	0.1	0.6	*	0.6	+0.6
	23–26	*	*	0.3	*	0.1	*	*	0.3	0.3	*	*	0.1	0.5	0.1	0.1	0.8	0.3	0.5	+0.2
	27–30	0.1	*	*	*	0.3	*	*	*	*	*	*	0.3	*	0.3	*	0.1	0.1	*	-0.1
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take other narcotics [d]																				
% saying any	18	24.8	22.9	23.1	24.0	27.5	21.6	24.6	21.4	23.0	20.7	20.6	21.5	36.3	31.0	28.5	25.8	22.0	20.0	-2.0
	19–22	15.2	19.8	23.2	23.0	21.8	21.9	22.6	19.9	17.6	23.7	16.8	15.3	31.4	31.3	25.7	29.5	20.9	21.7	+0.8
	23–26	9.4	10.4	11.2	13.5	14.6	18.4	16.8	18.3	17.6	14.2	16.0	19.3	36.7	30.4	27.9	25.6	29.2	24.4	-4.8
	27–30	8.3	7.2	8.4	11.2	11.8	11.0	12.0	12.5	13.1	10.6	14.3	14.2	28.4	29.8	32.9	30.4	29.6	28.7	-0.9
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	2.9	1.8	2.0	2.0	2.1	2.4	2.4	1.9	1.8	2.6	1.3	1.9	3.8	2.6	1.8	1.9	1.8	1.5	-0.3
	19–22	0.8	0.4	1.2	1.8	1.3	1.0	0.5	1.0	0.9	0.3	1.3	0.4	1.8	2.1	1.4	2.7	0.5	1.1	+0.6
	23–26	0.3	*	0.4	0.5	0.6	0.6	0.5	0.8	0.5	0.3	0.1	0.9	1.6	1.1	1.0	1.6	1.2	1.0	-0.1
	27–30	*	0.2	*	*	0.3	0.1	*	*	0.6	*	0.6	0.6	0.9	1.2	0.1	0.5	0.5	*	-0.5
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take amphetamines [e]																				
% saying any	18	33.8	30.8	32.9	33.2	34.4	28.1	31.4	28.8	29.0	27.4	27.3	30.0	31.1	31.3	30.5	25.7	25.0	24.2	-0.8
	19–22	24.4	25.5	28.4	28.0	28.6	24.0	23.5	25.9	25.4	26.9	19.9	26.6	27.3	29.5	30.5	37.9	33.4	38.5	+5.1
	23–26	14.1	14.2	14.5	17.5	18.4	18.0	18.8	18.4	19.7	17.6	17.9	21.3	23.8	27.7	26.1	27.0	31.5	28.5	-3.0
	27–30	11.0	11.8	11.9	12.9	12.3	12.0	13.5	11.8	12.5	10.0	12.8	16.4	16.4	17.2	22.9	24.7	24.1	27.0	+2.9
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	3.4	2.8	3.1	2.2	2.4	2.1	2.9	2.2	2.0	2.4	1.8	2.0	2.9	2.2	2.4	2.2	2.9	2.5	-0.3
	19–22	1.2	0.7	1.7	1.6	1.3	1.2	0.5	0.7	1.1	0.4	1.3	1.6	1.2	4.3	2.0	3.5	3.8	4.3	+0.5
	23–26	0.5	0.6	0.3	0.5	0.3	0.7	0.1	0.3	0.7	*	0.1	0.3	0.8	1.3	1.5	1.9	2.2	1.3	-1.0
	27–30	0.3	0.6	0.1	0.5	0.9	0.1	*	0.4	0.4	0.4	0.3	0.5	0.3	0.3	0.3	0.1	0.3	0.8	+0.5
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

(List of drugs continued.)

TABLE 7-2 (cont.)
Trends in Friends' Use of Drugs as Estimated by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, 45, 50, and 55

Percentage saying friends use [a]

Q. How many of your friends would you estimate. . .	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Take sedatives/ barbiturates [f]																			
% saying any	18	30.5	31.1	31.3	28.3	26.6	27.1	25.6	24.3	19.7	20.3	17.4	14.8	16.4	17.8	18.2	17.8	21.6	20.4
	19–22	33.2	27.9	27.7	23.6	22.0	17.2	18.8	15.5	14.0	14.1	11.9	12.8	10.7	11.7	9.7	13.3	11.6	12.1
	23–26	—	—	—	—	22.2	18.7	16.3	14.1	11.2	10.4	8.9	8.3	8.7	8.2	7.6	9.6	6.9	8.4
	27–30	—	—	—	—	—	—	—	—	12.0	8.5	8.8	7.1	6.6	6.7	7.4	7.2	6.7	6.5
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	2.6	2.1	1.8	1.7	1.7	1.6	1.4	1.1	1.1	1.4	0.6	0.5	0.6	1.0	1.1	1.4	1.6	1.1
	19–22	1.1	1.3	1.0	0.8	0.8	0.5	0.3	0.4	0.8	0.1	0.2	0.3	0.1	0.1	0.3	0.8	0.2	0.7
	23–26	—	—	—	—	0.4	0.3	0.3	0.3	0.1	0.2	0.2	0.1	0.1	0.3	0.2	*	*	0.8
	27–30	—	—	—	—	—	—	—	—	0.2	*	0.4	0.2	0.2	0.2	*	*	0.3	*
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take quaaludes																			
% saying any	18	32.5	35.0	35.5	29.7	26.1	26.0	23.5	22.0	17.1	16.6	14.3	12.0	13.1	14.2	14.2	15.5	18.1	16.1
	19–22	38.3	36.2	35.4	30.5	24.6	19.9	20.3	16.9	12.5	10.9	10.0	10.6	9.2	10.0	7.8	11.5	10.1	9.3
	23–26	—	—	—	—	25.7	21.0	17.4	15.0	12.1	10.3	8.6	5.9	6.4	7.6	7.7	9.0	6.3	6.5
	27–30	—	—	—	—	—	—	—	—	11.8	7.9	8.2	7.0	7.1	6.5	6.6	4.5	6.9	4.9
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	3.6	3.6	2.6	2.6	1.7	1.3	1.6	1.0	1.0	1.3	0.8	0.5	0.8	1.1	1.1	1.3	1.7	1.1
	19–22	1.9	2.7	1.2	1.3	1.2	0.6	0.2	0.4	0.4	0.2	0.6	0.2	0.1	0.1	0.2	0.7	0.1	0.6
	23–26	—	—	—	—	0.6	0.3	0.7	0.2	0.2	0.4	0.2	0.1	0.2	0.6	0.2	0.2	*	0.8
	27–30	—	—	—	—	—	—	—	—	0.5	0.2	0.2	0.2	*	0.2	*	*	0.2	*
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take tranquilizers																			
% saying any	18	29.7	29.5	29.9	26.7	26.6	25.8	24.2	23.3	19.9	18.0	14.9	13.5	14.6	15.5	16.5	15.8	18.1	17.9
	19–22	37.5	33.9	28.7	22.9	22.0	19.7	20.6	18.0	16.4	14.8	13.4	13.0	11.3	11.9	9.5	13.6	10.5	11.7
	23–26	—	—	—	—	29.3	26.3	22.3	20.8	15.5	13.1	14.8	12.1	12.5	11.0	13.4	10.4	10.7	9.6
	27–30	—	—	—	—	—	—	—	—	20.1	16.6	16.9	14.9	12.0	12.5	13.9	11.9	11.0	10.8
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.3	12.2	13.1	10.8
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	1.9	1.4	1.1	1.2	1.5	1.2	1.3	1.0	0.7	1.5	0.5	0.4	0.7	0.9	0.9	1.1	1.4	0.8
	19–22	0.7	0.9	0.5	0.8	0.3	0.7	0.3	0.6	0.4	0.1	0.4	0.5	0.1	0.1	0.2	0.7	0.7	0.8
	23–26	—	—	—	—	0.4	0.3	0.5	*	0.3	0.4	0.2	0.3	0.1	0.4	0.2	*	*	1.1
	27–30	—	—	—	—	—	—	—	—	0.5	0.3	0.4	0.2	0.1	0.2	0.4	*	0.2	*
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	0.3	0.3	0.1
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

(Years Cont.)

(Table continued on next page.)

TABLE 7-2 (cont.)
Trends in Friends' Use of Drugs as Estimated by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, 45, 50, and 55

Q. How many of your friends would you estimate. . .	Age Group	Percentage saying friends use [a] 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Take sedatives/ barbiturates [f]																				
% saying any	18	22.8	20.9	21.6	22.1	25.3	18.1	25.2	22.3	22.5	20.8	19.8	21.0	23.5	21.1	17.3	15.5	14.2	14.5	+0.3
	19–22	14.8	16.0	15.2	18.6	17.1	14.4	18.8	19.6	18.7	20.1	17.8	16.4	19.1	14.5	13.7	19.0	13.6	18.2	+4.6
	23–26	7.9	8.3	6.6	11.1	10.9	12.9	16.7	15.7	16.2	16.5	13.4	18.6	17.6	12.2	11.8	14.3	15.0	11.9	-3.0
	27–30	6.1	5.7	6.4	7.9	7.4	7.3	11.5	10.5	13.5	12.5	15.2	12.7	15.3	13.7	14.5	16.5	13.0	13.1	0.0
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	2.5	1.4	1.7	1.1	1.7	1.9	2.0	1.8	1.3	1.6	1.3	1.3	1.5	1.3	1.5	1.2	1.1	1.4	+0.3
	19–22	0.4	0.4	1.0	0.9	0.8	0.7	0.3	0.3	0.2	0.6	0.5	1.0	0.6	0.6	0.3	1.2	0.7	1.3	+0.6
	23–26	*	*	0.4	0.4	*	0.2	0.4	0.2	0.5	*	0.4	0.4	0.5	0.3	0.4	0.7	0.4	0.7	+0.2
	27–30	*	0.2	*	0.3	0.6	0.1	*	0.5	0.4	0.6	0.1	0.9	0.4	0.2	*	0.1	0.1	0.4	+0.3
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take quaaludes																				
% saying any	18	17.4	15.5	16.2	17.8	18.0	14.2	16.6	13.6	13.4	13.6	11.2	14.3	—	—	—	—	—	—	—
	19–22	10.6	11.4	13.1	14.6	13.0	10.3	8.3	8.2	8.6	8.8	5.9	5.3	—	—	—	—	—	—	—
	23–26	6.6	6.4	4.9	7.7	8.5	8.9	6.5	7.7	5.6	5.6	4.1	8.0	—	—	—	—	—	—	—
	27–30	4.1	5.1	5.0	4.9	6.6	4.3	4.4	3.6	4.9	4.3	5.8	4.5	—	—	—	—	—	—	—
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	2.0	1.4	1.4	1.2	1.2	1.2	1.6	1.3	1.3	1.6	0.8	1.1	—	—	—	—	—	—	—
	19–22	0.5	0.4	0.9	0.8	0.1	0.4	*	0.4	0.2	*	0.2	*	—	—	—	—	—	—	—
	23–26	*	0.2	0.3	0.3	0.1	0.2	0.1	0.2	0.3	0.3	*	0.1	—	—	—	—	—	—	—
	27–30	*	0.2	0.3	*	0.3	*	*	0.3	0.7	*	0.3	0.5	—	—	—	—	—	—	—
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take tranquilizers																				
% saying any	18	19.7	16.4	19.4	18.6	21.2	17.2	18.3	16.9	15.3	15.5	15.0	15.8	16.1	13.9	13.3	11.7	10.1	11.5	+1.5
	19–22	13.7	16.2	16.7	21.3	18.1	14.5	12.3	11.5	13.0	17.2	11.6	11.1	11.6	8.2	10.2	12.7	8.6	10.8	+2.2
	23–26	8.5	9.8	11.2	12.4	14.9	12.9	15.1	13.1	10.7	12.3	12.6	15.5	13.4	9.9	7.3	9.3	8.9	7.5	-1.5
	27–30	12.6	10.4	10.6	9.6	10.6	10.4	9.9	9.7	8.5	9.1	12.3	10.3	9.5	9.4	12.6	12.3	8.7	11.6	+2.8
	35	10.7	11.4	10.8	12.2	12.5	11.4	12.7	12.4	12.2	14.7	16.1	14.8	17.6	17.7	17.9	17.3	17.7	19.2	+1.5
	40	13.7	14.8	15.2	15.1	15.6	15.0	13.6	14.1	16.1	16.0	15.0	15.1	13.6	12.9	15.8	14.5	13.2	14.5	+1.3
	45	—	—	—	—	—	17.3	19.8	15.4	18.3	20.7	17.3	17.5	16.3	16.7	18.8	16.7	15.8	14.5	-1.3
	50	—	—	—	—	—	—	—	—	—	—	19.7	21.0	17.8	19.1	18.1	16.7	17.9	15.7	-2.2
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17.0	16.6	17.0	+0.4
% saying most or all	18	2.3	1.3	2.1	1.3	1.6	1.5	1.7	1.6	1.2	1.8	1.2	1.5	1.4	0.8	0.8	1.0	1.3	1.5	+0.2
	19–22	0.6	0.3	0.6	0.9	0.4	0.4	0.3	0.3	0.3	0.3	0.1	0.1	0.6	0.6	0.2	0.6	0.4	0.8	+0.4
	23–26	0.1	*	0.5	0.8	0.1	*	0.5	0.7	0.4	*	0.1	0.3	0.2	0.1	0.3	0.3	0.3	0.2	-0.1
	27–30	*	0.4	*	0.4	0.6	0.1	*	0.2	0.2	*	0.1	0.5	*	*	*	0.1	0.1	0.6	+0.5
	35	0.2	0.6	0.6	0.2	0.1	0.2	0.3	0.5	0.3	0.5	0.3	0.4	0.6	0.3	0.4	0.4	0.5	0.4	-0.1
	40	0.0	0.4	0.1	0.3	0.2	*	0.2	0.2	0.3	0.3	0.3	0.1	*	*	0.1	*	0.2	*	-0.2
	45	—	—	—	—	—	0.3	0.2	0.2	0.1	0.3	*	0.2	0.1	0.1	*	0.2	0.2	0.1	-0.1
	50	—	—	—	—	—	—	—	—	—	—	0.3	0.1	0.1	0.4	0.2	0.1	0.2	0.2	0.0
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.3	0.4	0.2	-0.1

(List of drugs continued.)

TABLE 7-2 (cont.)
Trends in Friends' Use of Drugs as Estimated by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, 45, 50, and 55

Percentage saying friends use [a]

Q. How many of your friends would you estimate. . .	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Drink alcoholic beverages																			
% saying any	18	96.1	94.7	95.7	95.5	94.6	94.6	95.6	95.4	95.7	95.1	92.0	91.2	90.5	88.9	90.1	90.9	89.6	90.7
	19–22	96.3	96.7	96.6	97.3	96.8	95.8	96.9	95.6	97.0	97.6	96.1	95.2	93.1	95.1	92.5	94.8	93.7	94.5
	23–26	—	—	—	—	96.8	96.8	96.2	95.9	95.3	95.4	94.7	93.9	95.1	94.4	94.0	94.1	92.7	95.4
	27–30	—	—	—	—	—	—	—	—	96.1	96.0	95.2	94.4	95.6	93.4	93.3	93.3	93.1	95.1
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	89.6	89.9	90.3	89.5
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	68.9	67.7	69.7	69.0	66.6	66.0	68.0	71.8	68.1	67.1	60.5	58.6	56.9	57.0	59.6	56.4	56.4	60.9
	19–22	76.6	77.6	75.2	75.1	74.9	71.9	74.2	71.3	73.4	74.1	70.0	71.4	67.4	66.5	68.7	63.9	67.0	63.8
	23–26	—	—	—	—	73.2	74.4	69.5	74.9	68.9	69.8	67.1	69.3	68.8	68.7	70.7	67.0	68.9	66.6
	27–30	—	—	—	—	—	—	—	—	66.7	67.8	62.0	62.7	63.3	61.3	63.2	62.6	64.1	66.6
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	43.8	45.1	49.5	46.6
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Get drunk at least once a week																			
% saying any	18	83.1	81.8	83.1	83.9	81.5	82.5	84.7	85.6	84.4	82.8	79.2	79.8	79.9	79.2	81.4	78.9	78.5	82.4
	19–22	80.9	79.9	80.0	80.4	79.8	76.7	82.0	81.1	80.6	80.4	80.1	80.8	76.5	81.1	79.6	83.2	80.9	79.2
	23–26	—	—	—	—	73.1	72.7	73.5	73.7	72.1	73.1	72.2	74.0	73.1	74.3	72.1	73.1	74.5	71.9
	27–30	—	—	—	—	—	—	—	—	66.3	61.8	65.4	65.2	65.5	64.5	62.7	67.1	66.7	65.4
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	44.3	43.2	44.9	42.9
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	30.1	29.4	29.9	31.0	29.6	29.9	31.8	31.3	29.6	31.1	27.5	29.7	28.6	27.6	28.4	27.4	29.0	30.9
	19–22	21.9	23.3	22.0	20.2	22.7	21.7	20.8	21.3	24.0	22.6	23.6	24.9	22.6	28.8	26.3	28.2	26.0	26.6
	23–26	—	—	—	—	11.4	11.6	12.5	11.9	12.8	12.0	13.9	11.6	14.6	13.2	15.2	15.2	14.0	17.0
	27–30	—	—	—	—	—	—	—	—	5.2	6.3	6.7	6.6	5.9	6.7	6.4	7.9	8.6	7.7
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.6	3.6	5.4	3.2
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Smoke cigarettes																			
% saying any	18	90.6	88.5	88.3	87.0	86.0	87.0	87.8	88.3	87.7	86.5	84.9	85.7	84.4	84.8	88.1	87.9	88.3	89.9
	19–22	94.4	94.3	93.4	93.1	91.9	91.6	91.1	90.3	89.3	90.0	86.1	86.1	86.7	86.7	86.1	88.8	89.2	91.3
	23–26	—	—	—	—	93.9	95.0	91.6	92.1	89.8	90.1	88.7	89.6	85.6	88.3	86.4	86.8	85.3	85.4
	27–30	—	—	—	—	—	—	—	—	92.6	89.8	90.7	90.4	88.0	85.8	84.8	84.9	85.4	84.1
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	72.7	71.7	71.7	72.4
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	23.3	22.4	24.1	22.4	19.2	22.8	21.5	21.0	20.2	23.1	21.4	21.8	21.4	25.0	25.3	27.5	30.4	34.4
	19–22	31.8	27.6	25.6	25.2	25.6	22.7	21.9	22.5	19.3	19.9	19.2	20.2	20.3	22.2	21.7	28.4	24.0	25.1
	23–26	—	—	—	—	25.6	22.7	19.7	18.5	16.5	20.5	16.9	18.1	16.0	15.5	16.6	13.9	17.6	17.0
	27–30	—	—	—	—	—	—	—	—	15.8	14.2	11.6	12.9	11.9	14.3	10.9	12.3	10.4	12.1
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.9	7.2	9.3	7.2
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

(Years Cont.)

(Table continued on next page.)

TABLE 7-2 (cont.)
Trends in Friends' Use of Drugs as Estimated by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, 45, 50, and 55

Q. How many of your friends would you estimate. . .	Age Group	Percentage saying friends use [a] 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Drink alcoholic beverages																				
% saying any	18	91.2	90.2	89.8	89.2	88.0	87.9	87.8	87.2	86.0	85.1	85.2	83.7	83.9	82.6	82.0	82.0	79.7	75.5	-4.1 s
	19–22	94.5	92.8	95.2	93.4	94.5	92.5	90.4	95.0	91.9	94.0	92.6	93.2	90.9	88.9	93.3	92.0	91.0	—	—
	23–26	95.5	93.3	94.5	93.1	95.3	92.8	94.9	91.6	93.6	94.7	93.3	95.0	95.3	95.3	92.3	92.5	94.1	—	—
	27–30	93.1	94.4	92.7	91.4	92.8	90.5	94.4	93.7	95.6	92.4	91.7	93.9	93.0	92.5	93.4	91.6	95.1	—	—
	35	88.1	88.7	89.6	89.3	90.1	87.4	93.4	91.3	90.6	90.5	91.0	90.4	93.3	93.0	92.7	93.2	92.6	92.6	0.0
	40	88.4	88.9	90.7	89.6	90.5	89.2	90.5	92.1	90.8	93.0	89.3	92.6	92.1	92.4	91.3	91.9	90.8	91.2	+0.4
	45	—	—	—	—	—	87.9	90.3	89.8	90.1	89.8	90.5	89.5	90.6	90.8	90.1	91.4	92.4	92.5	+0.0
	50	—	—	—	—	—	—	—	—	—	—	88.9	90.2	89.9	90.4	90.1	89.2	92.0	90.3	-1.7
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	87.6	89.3	89.5	+0.2
% saying most or all	18	61.0	58.2	57.2	59.2	53.7	53.1	53.9	55.3	52.4	52.0	51.6	50.5	51.4	50.3	49.4	46.9	46.2	42.3	-3.8
	19–22	69.4	67.8	70.1	65.4	68.8	63.9	66.4	71.8	65.4	71.1	64.4	69.7	69.1	63.3	66.3	63.2	63.4	—	—
	23–26	67.4	63.6	70.8	65.7	73.4	66.0	71.3	69.3	69.2	70.2	76.3	76.9	75.5	79.7	74.3	73.7	76.5	—	—
	27–30	62.9	64.4	64.8	64.9	66.3	61.5	69.0	66.2	70.7	65.6	67.1	74.0	72.2	70.9	74.9	72.9	74.7	—	—
	35	47.1	46.0	49.1	48.4	52.9	51.6	53.7	55.5	55.2	56.1	55.7	53.2	56.9	61.9	58.7	62.1	66.1	64.2	-2.0
	40	37.7	41.4	42.5	44.7	44.8	47.2	43.3	47.2	45.9	50.3	48.9	54.5	54.7	54.3	55.9	56.6	53.6	55.2	+1.6
	45	—	—	—	—	—	38.9	41.7	42.4	45.1	46.6	47.0	45.9	46.7	47.2	53.5	52.0	56.1	57.8	+1.7
	50	—	—	—	—	—	—	—	—	—	—	37.7	39.3	41.9	43.5	45.8	48.2	48.6	48.8	+0.2
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	39.1	41.0	42.4	+1.4
Get drunk at least once a week																				
% saying any	18	81.1	81.5	79.5	79.6	78.3	77.3	79.0	78.7	77.4	75.5	76.2	76.2	73.5	71.9	68.9	69.9	64.2	58.9	-5.3 ss
	19–22	82.3	82.8	82.2	81.9	81.5	81.5	80.5	85.1	81.7	84.4	81.3	82.8	81.2	78.3	83.6	77.7	78.2	—	—
	23–26	74.1	71.0	76.5	74.7	81.0	76.4	75.8	80.7	80.9	80.4	79.5	83.0	83.7	83.9	79.7	83.1	85.6	—	—
	27–30	65.5	65.9	64.3	64.7	68.9	66.5	73.8	72.4	74.6	72.0	71.7	78.7	78.2	78.3	80.1	74.4	77.2	—	—
	35	46.1	44.5	46.9	47.6	48.3	47.9	52.0	50.7	52.6	55.0	56.0	56.0	59.2	63.2	62.4	63.9	65.4	68.0	+2.7
	40	41.6	40.6	42.2	41.3	42.6	42.9	43.2	48.4	47.2	46.3	48.2	53.7	49.6	48.5	54.9	54.7	53.4	58.0	+4.6 ~
	45	—	—	—	—	—	41.6	42.2	41.6	40.0	42.7	45.7	45.4	49.1	45.9	50.0	50.5	52.1	52.8	+0.8
	50	—	—	—	—	—	—	—	—	—	—	40.0	38.3	39.6	42.4	42.5	45.0	45.5	46.7	+1.2
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	35.1	35.4	39.2	+3.8
% saying most or all	18	31.7	30.1	32.4	32.7	28.3	27.1	27.6	28.5	27.7	27.0	25.2	24.4	23.7	23.8	21.2	20.7	18.5	15.5	-3.0
	19–22	29.8	29.3	28.1	30.2	31.0	29.6	29.0	31.2	32.9	32.0	28.9	31.4	27.7	27.6	27.2	28.1	28.7	—	—
	23–26	16.0	16.8	17.4	19.1	19.2	18.3	24.0	24.0	20.3	22.8	23.1	23.2	24.0	22.6	20.0	23.4	20.2	—	—
	27–30	9.3	12.1	9.8	11.7	8.9	13.0	9.4	11.2	13.5	12.2	10.9	17.1	13.7	13.2	13.5	13.2	15.2	—	—
	35	4.4	4.9	4.6	4.8	4.5	5.2	5.3	5.3	5.6	6.1	7.3	5.9	7.4	8.4	6.8	8.3	10.7	10.8	+0.1
	40	2.8	3.0	2.5	2.9	3.8	3.9	3.0	3.6	4.0	3.4	4.8	4.6	4.8	4.8	4.3	4.2	5.7	5.6	-0.2
	45	—	—	—	—	—	3.6	2.7	2.7	3.1	3.7	4.1	3.2	3.2	3.5	4.3	5.1	5.1	5.5	+0.4
	50	—	—	—	—	—	—	—	—	—	—	3.2	2.7	2.0	2.9	2.5	3.6	4.1	3.6	-0.5
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.0	1.9	3.2	+1.4
Smoke cigarettes																				
% saying any	18	89.5	89.3	87.2	86.8	85.4	83.3	83.7	81.8	81.4	77.1	78.4	79.6	78.0	75.4	74.3	72.1	66.4	60.2	-6.2 ss
	19–22	92.6	91.0	90.9	90.9	89.7	86.5	89.7	89.3	85.8	86.8	84.4	88.3	81.8	79.4	78.2	77.4	76.5	76.0	-0.5
	23–26	88.7	84.1	86.5	86.7	86.4	86.5	87.0	87.3	85.4	84.1	86.8	85.3	87.7	86.5	83.1	80.3	82.2	79.8	-2.5
	27–30	81.1	86.3	85.1	84.9	87.0	82.8	83.5	81.0	84.4	81.7	82.1	84.1	84.6	83.8	85.2	81.6	84.4	78.6	-5.8
	35	71.8	69.9	70.8	69.2	66.6	67.0	67.7	65.5	67.0	64.8	67.6	62.2	65.4	66.1	66.4	63.2	63.8	65.2	+1.5
	40	70.2	70.0	67.8	64.3	65.5	65.1	62.4	63.8	64.6	59.2	59.7	60.5	57.4	57.4	56.7	59.1	56.2	54.5	-1.7
	45	—	—	—	—	—	66.1	67.0	62.9	60.9	58.5	56.1	57.7	60.6	58.0	57.4	54.3	56.0	49.7	-6.3 ss
	50	—	—	—	—	—	—	—	—	—	—	62.1	61.3	59.2	55.9	57.4	54.7	55.4	55.4	0.0
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	56.5	52.4	52.9	+0.5
% saying most or all	18	33.9	31.1	28.2	25.0	23.0	19.6	20.6	16.7	15.8	16.4	13.9	14.1	14.9	14.1	12.2	11.0	8.1	6.5	-1.5
	19–22	28.8	26.8	29.4	27.0	25.7	20.2	20.7	20.4	15.2	17.9	12.9	15.3	16.7	13.7	13.6	10.8	9.4	8.9	-0.5
	23–26	16.8	17.5	17.0	15.5	15.1	18.3	19.8	19.6	13.9	14.7	15.0	13.4	15.0	11.1	10.6	13.5	11.4	9.5	-1.9
	27–30	12.3	13.4	11.7	10.2	12.9	12.2	9.2	12.6	12.6	12.7	10.8	12.4	7.9	7.4	10.0	6.8	7.7	5.9	-1.7
	35	8.0	9.0	6.7	8.8	6.6	6.3	6.9	6.0	6.8	5.7	5.9	6.4	6.8	6.2	5.5	4.9	5.8	6.0	+0.2
	40	8.1	7.4	6.8	5.7	5.8	5.9	6.0	7.0	5.1	4.7	4.5	3.9	4.0	4.2	2.9	3.8	4.0	4.1	+0.1
	45	—	—	—	—	—	5.7	5.9	6.1	5.4	4.5	3.7	4.8	5.2	3.8	3.4	4.6	2.5	3.3	+0.8
	50	—	—	—	—	—	—	—	—	—	—	4.0	4.3	4.2	3.6	2.6	2.3	4.4	3.4	-1.0
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.3	2.2	2.7	+0.4

(List of drugs continued.)

TABLE 7-2 (cont.)
Trends in Friends' Use of Drugs as Estimated by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, 45, 50, and 55

Percentage saying friends use [a]

Q. How many of your friends would you estimate. . .	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Take steroids																			
% saying any	18	—	—	—	—	—	—	—	—	—	—	25.9	24.7	21.5	19.0	18.1	19.5	17.9	18.9
	19–22	—	—	—	—	—	—	—	—	—	23.4	21.5	22.2	19.7	20.7	16.8	16.6	16.1	16.8
	23–26	—	—	—	—	—	—	—	—	—	15.3	15.0	12.3	14.5	11.1	10.5	12.4	7.3	13.0
	27–30	—	—	—	—	—	—	—	—	—	9.9	10.5	7.5	8.0	8.0	8.0	8.0	10.2	9.1
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	—	—	—	—	—	—	—	—	—	—	1.8	1.0	1.7	0.9	1.2	1.3	0.8	1.7
	19–22	—	—	—	—	—	—	—	—	—	0.2	0.6	*	0.1	0.4	0.2	0.1	*	0.1
	23–26	—	—	—	—	—	—	—	—	—	0.4	*	*	0.2	0.1	0.1	*	*	0.5
	27–30	—	—	—	—	—	—	—	—	—	0.5	*	*	*	0.2	0.1	*	*	*
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Approximate Weighted N =	18	*2,987*	*3,307*	*3,303*	*3,095*	*2,945*	*2,971*	*2,798*	*2,948*	*2,961*	*2,587*	*2,361*	*2,339*	*2,373*	*2,410*	*2,337*	*2,379*	*2,156*	*2,292*
	19–22	*576*	*592*	*564*	*579*	*543*	*554*	*579*	*572*	*562*	*579*	*556*	*526*	*510*	*468*	*435*	*470*	*469*	*467*
	23–26					*527*	*534*	*546*	*528*	*528*	*506*	*510*	*507*	*516*	*495*	*449*	*456*	*416*	*419*
	27–30									*516*	*507*	*499*	*476*	*478*	*461*	*419*	*450*	*464*	*454*
	35															*1,200*	*1,187*	*1,187*	*1,209*
	40																		
	45																		
	50																		
	55																		

(Table continued on next page.)

TABLE 7-2 (cont.)
Trends in Friends' Use of Drugs as Estimated by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, 45, 50, and 55

Q. How many of your friends would you estimate. . .	Age Group	Percentage saying friends use [a] 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Take steroids																				
% saying any	18	18.3	20.0	19.8	21.7	21.6	21.1	22.8	19.1	19.8	20.1	19.4	19.3	16.4	16.0	18.7	17.4	15.7	12.8	-3.0 s
	19–22	20.0	20.6	18.9	20.0	19.3	17.1	21.4	20.1	21.0	18.3	14.8	16.8	13.8	15.3	12.6	11.1	16.4	12.7	-3.7
	23–26	9.2	15.0	12.2	13.6	14.3	12.9	12.4	11.6	13.4	13.8	13.3	12.8	11.7	13.9	10.0	11.6	12.7	8.7	-4.0
	27–30	7.0	11.2	9.3	10.7	6.4	11.6	10.1	7.4	7.5	6.7	6.6	12.0	9.2	8.5	11.6	10.0	9.1	11.0	+1.9
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
% saying most or all	18	1.4	0.9	1.9	1.2	1.5	1.5	2.6	1.5	0.9	1.2	1.3	1.5	1.7	1.1	1.8	1.5	1.7	1.0	-0.7
	19–22	0.3	0.1	0.3	0.7	0.7	0.4	*	0.1	0.3	0.3	0.3	*	0.7	0.6	0.4	0.7	0.5	0.4	-0.1
	23–26	*	0.1	0.3	0.2	0.1	*	0.1	0.3	0.3	*	*	0.7	*	0.1	0.1	0.3	0.1	*	-0.1
	27–30	*	*	*	*	0.3	*	*	0.1	*	*	*	0.3	*	*	*	*	*	0.2	+0.2
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Approximate Weighted N =	18	*2,313*	*2,060*	*1,838*	*1,923*	*1,968*	*2,233*	*2,271*	*2,266*	*2,266*	*2,253*	*2,125*	*2,110*	*2,195*	*2,208*	*2,144*	*1,973*	*1,920*	*2,055*	
	19–22	*437*	*426*	*402*	*402*	*375*	*388*	*443*	*395*	*377*	*362*	*375*	*382*	*376*	*353*	*348*	*340*	*315*	*297*	
	23–26	*394*	*414*	*387*	*403*	*358*	*362*	*411*	*361*	*336*	*340*	*355*	*311*	*359*	*314*	*330*	*328*	*305*	*305*	
	27–30	*428*	*424*	*363*	*359*	*348*	*369*	*396*	*363*	*350*	*324*	*332*	*309*	*340*	*325*	*333*	*284*	*307*	*260*	
	35	*1,067*	*1,071*	*1,033*	*1,005*	*918*	*968*	*985*	*1,041*	*953*	*884*	*905*	*974*	*922*	*858*	*877*	*848*	*776*	*741*	
	40	*1,098*	*1,156*	*1,144*	*1,119*	*1,083*	*945*	*1,004*	*975*	*951*	*896*	*924*	*905*	*952*	*877*	*852*	*844*	*919*	*808*	
	45						*976*	*1,074*	*1,052*	*1,009*	*999*	*904*	*937*	*889*	*887*	*874*	*844*	*825*	*889*	
	50											*940*	*1,009*	*1,016*	*974*	*987*	*840*	*891*	*830*	
	50																*880*	*943*	*933*	

Source. The Monitoring the Future study, the University of Michigan.

Notes. Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding. ' — ' indicates data not available. ' * ' indicates a prevalence rate of less than 0.05%.

[a]Answer alternatives were: (1) None, (2) A few, (3) Some, (4) Most, (5) All. The any percentage combines categories (2)–(5). The most or all percentage combines categories (4) and (5).

[b]For the young adult sample, any illicit drug includes all of the drugs listed in this table except cigarettes and alcohol. For the 35-, 40-, 45-, and 50-year-olds, any illicit drug includes marijuana, tranquilizers, crack, cocaine powder, and other illicit drugs.

[c]In 2001 the question text was changed from other psychedelics to other hallucinogens, and shrooms was added to the list of examples. These changes likely explain the discontinuity in the 2001 results.

[d]In 2010 the list of examples for narcotics other than heroin was changed from methadone, opium to Vicodin, OxyContin, Percocet, etc. This change likely explains the discontinuity in the 2010 results.

[e]In 2011 pep pills and bennies were replaced in the list of examples by Adderall and Ritalin. This change likely explains the discontinuity in the 2011 results.

[f]In 2004 the question text was changed from barbiturates to sedatives/barbiturates and the list of examples was changed from downers, goofballs, reds, yellows, etc. to just downers. These changes likely explain the discontinuity in the 2004 results.

[g]No data reported in 2015 due to a printing error in the questionnaire in which this question is asked.

TABLE 7-3
Trends in Exposure to Drug Use
among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

Q. During the LAST 12 MONTHS how often have you been around people who were taking each of the following to get high or for "kicks"?

Percentage saying exposed to drug [a]

Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Any illicit drug [b]																		
% saying any																		
18	84.3	82.7	81.4	79.4	77.9	77.7	75.5	73.9	71.3	68.6	67.6	64.2	61.3	66.1	70.8	75.3	78.0	78.8
19–22	80.6	81.0	81.5	76.5	76.3	77.4	74.6	72.7	69.5	61.5	60.8	58.9	58.6	58.4	60.7	66.4	67.2	65.3
23–26	—	—	—	—	68.9	70.2	68.0	62.4	62.7	58.3	54.6	52.1	48.2	49.9	47.1	54.2	50.3	55.4
27–30	—	—	—	—	—	—	—	—	52.4	50.2	47.0	39.6	41.7	38.9	45.6	42.4	44.9	41.6
% saying often exposed																		
18	36.3	36.1	31.4	29.8	28.3	27.2	26.3	23.3	20.8	22.0	20.7	18.2	18.0	24.0	29.3	32.3	33.8	34.7
19–22	34.6	34.0	32.1	24.4	24.4	23.7	21.1	18.9	19.9	16.2	16.4	17.6	21.4	16.1	18.1	23.7	20.4	25.3
23–26	—	—	—	—	20.7	23.3	18.5	17.4	18.2	13.8	13.7	13.3	12.2	11.1	11.1	12.5	12.8	14.3
27–30	—	—	—	—	—	—	—	—	13.7	12.0	10.8	8.2	10.5	9.0	12.5	8.5	10.1	10.3
Any illicit drug other than marijuana [b]																		
% saying any																		
18	58.5	62.6	62.5	59.4	59.8	59.3	55.3	51.7	47.8	47.1	45.4	40.0	41.6	42.6	45.3	47.2	49.7	47.9
19–22	56.9	58.4	61.6	54.9	57.1	53.3	53.4	48.5	46.4	36.5	39.4	33.8	37.1	29.4	33.9	36.8	36.5	39.4
23–26	—	—	—	—	51.5	51.9	51.5	43.6	42.9	36.8	34.0	30.0	27.3	27.8	24.9	26.8	23.2	25.6
27–30	—	—	—	—	—	—	—	—	35.8	33.7	31.5	25.8	26.6	24.2	25.8	21.1	21.8	21.4
% saying often exposed																		
18	14.1	17.1	16.6	14.2	14.6	12.9	12.1	10.2	9.6	10.7	9.2	7.9	7.5	9.6	9.4	11.1	12.1	11.7
19–22	11.8	15.6	13.5	11.1	10.7	10.2	8.2	8.1	7.5	6.7	4.5	4.4	5.5	4.1	5.1	7.7	3.9	7.6
23–26	—	—	—	—	9.0	10.4	9.3	8.5	6.7	5.0	5.1	3.5	2.6	3.0	2.2	3.5	3.4	3.1
27–30	—	—	—	—	—	—	—	—	6.0	4.7	4.1	3.2	3.7	2.4	3.4	2.9	3.4	3.2
Marijuana																		
% saying any																		
18	82.0	80.2	77.9	76.2	74.4	73.5	72.0	70.4	67.0	64.8	63.4	59.6	56.8	61.0	67.2	72.7	75.6	76.8
19–22	79.8	79.8	78.7	72.7	74.1	75.5	72.4	70.5	66.3	59.3	57.5	55.0	56.4	55.4	56.8	64.0	64.8	63.4
23–26	—	—	—	—	65.3	66.0	64.1	59.0	57.6	55.0	50.6	47.9	44.6	45.9	44.4	51.0	47.8	53.1
27–30	—	—	—	—	—	—	—	—	49.1	47.4	42.1	36.0	38.2	35.3	41.9	38.3	41.8	39.1
% saying often exposed																		
18	33.8	33.1	28.0	26.1	24.8	24.2	24.0	20.6	17.9	19.5	17.8	16.0	15.6	20.9	27.6	30.7	31.8	32.9
19–22	32.6	30.5	30.3	21.1	21.9	20.3	18.6	16.4	18.3	14.2	14.7	15.9	19.9	14.7	17.0	22.1	20.3	23.7
23–26	—	—	—	—	17.5	20.6	14.6	14.8	15.6	11.6	11.2	11.6	10.9	10.4	10.4	11.1	11.5	12.9
27–30	—	—	—	—	—	—	—	—	10.9	9.8	8.5	6.7	8.9	7.6	10.7	7.4	9.1	8.9
LSD																		
% saying any																		
18	17.2	17.4	16.1	13.8	12.5	13.2	13.1	12.9	13.4	15.0	14.9	15.7	17.8	21.0	24.2	26.1	27.6	25.9
19–22	17.4	15.8	16.0	13.5	12.8	12.7	10.8	10.9	12.0	12.0	12.1	13.1	19.3	13.4	16.5	18.6	20.7	22.3
23–26	—	—	—	—	8.3	9.3	8.8	7.3	6.3	6.7	8.4	8.6	8.8	7.8	8.4	9.9	8.6	7.6
27–30	—	—	—	—	—	—	—	—	3.6	3.2	3.3	3.6	3.9	4.9	5.3	5.5	4.3	3.9
% saying often exposed																		
18	1.4	2.0	1.9	1.4	1.5	1.3	1.6	1.8	1.6	2.2	2.6	2.9	3.0	3.9	4.2	6.1	4.7	5.1
19–22	1.4	1.5	1.4	0.6	0.8	0.7	0.5	1.2	0.6	1.1	1.2	1.0	2.0	1.1	0.4	3.6	1.4	1.8
23–26	—	—	—	—	0.3	0.4	0.4	0.7	0.6	0.3	0.5	0.2	0.8	0.3	0.5	0.5	0.4	0.2
27–30	—	—	—	—	—	—	—	—	0.3	0.2	0.5	0.2	0.2	0.5	0.5	0.2	0.2	*
Other hallucinogens [c]																		
% saying any																		
18	20.4	17.6	16.8	13.1	12.7	12.5	11.8	10.0	9.0	8.8	9.4	9.4	9.7	12.1	14.0	15.8	16.6	17.8
19–22	18.3	16.3	16.3	12.5	10.5	11.0	9.2	9.1	7.7	8.4	8.3	8.9	10.6	6.7	8.3	12.8	13.1	15.0
23–26	—	—	—	—	8.4	8.9	9.1	6.0	5.1	4.8	5.7	5.5	5.1	5.7	5.2	5.5	6.9	5.6
27–30	—	—	—	—	—	—	—	—	5.0	3.4	3.4	3.4	2.1	3.7	3.4	4.2	3.2	2.9
% saying often exposed																		
18	2.2	2.0	2.6	1.1	1.7	1.4	1.5	1.2	1.1	1.3	1.2	1.3	1.1	1.9	2.3	2.5	2.7	2.8
19–22	1.1	0.9	0.9	0.7	0.8	0.8	0.2	0.8	0.3	0.4	0.4	0.5	0.7	0.4	0.2	1.6	0.7	0.7
23–26	—	—	—	—	0.1	0.3	0.5	0.6	0.8	0.1	0.4	0.4	*	0.2	0.4	0.3	0.3	0.2
27–30	—	—	—	—	—	—	—	—	0.2	0.4	0.5	0.3	0.1	0.5	0.2	0.3	0.2	0.5

(Years Cont.)

(Table continued on next page.)

TABLE 7-3 (cont.)
Trends in Exposure to Drug Use
among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

Q. During the LAST 12 MONTHS how often have you been around people who were taking each of the following to get high or for "kicks"?

Percentage saying exposed to drug [a]

Age Group	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Any illicit drug [b]																			
% saying any																			
18	77.2	77.9	76.0	76.5	76.5	73.6	74.3	73.0	73.7	70.8	71.9	74.1	76.0	76.6	76.4	75.4	75.2	75.4	+0.2
19–22	69.1	65.8	64.7	69.7	65.7	68.0	67.6	68.8	67.1	67.4	66.2	69.8	66.0	68.3	70.4	72.1	73.6	72.5	-1.0
23–26	50.6	50.5	55.1	56.4	56.5	57.0	53.5	53.9	56.7	58.3	56.3	57.7	56.3	62.6	67.0	65.2	65.1	68.2	+3.1
27–30	37.5	41.1	40.8	42.2	47.0	46.7	43.3	45.7	48.4	44.1	48.7	42.5	49.3	51.6	58.9	57.2	57.1	56.7	-0.4
% saying often exposed																			
18	33.2	35.6	32.6	33.6	32.6	31.8	30.4	29.9	29.7	27.8	28.6	31.4	33.2	34.6	34.9	32.3	31.3	32.5	+1.2
19–22	24.2	24.0	21.3	26.1	25.2	26.5	26.8	25.2	24.2	22.8	20.1	23.7	26.5	24.8	27.3	24.6	29.8	26.2	-3.6
23–26	14.2	15.0	15.9	16.4	15.9	17.8	15.1	18.7	14.9	18.9	15.4	14.9	18.8	19.4	21.2	20.8	20.1	23.2	+3.1
27–30	8.5	9.6	9.4	10.4	13.8	13.9	10.3	14.5	13.2	9.7	9.7	12.1	13.2	13.6	15.7	18.5	16.1	18.9	+2.8
Any illicit drug other than marijuana [b]																			
% saying any																			
18	47.3	46.5	47.2	49.9	49.3	46.3	48.3	45.9	45.4	45.4	43.8	44.3	47.2	46.6	45.0	44.2	41.0	44.3	+3.3
19–22	40.0	36.4	38.1	39.2	38.0	40.2	40.9	41.1	38.5	42.7	38.2	37.1	38.5	38.5	41.8	38.9	44.0	42.3	-1.7
23–26	27.1	28.0	31.0	31.4	31.5	32.2	32.6	32.3	34.5	33.1	31.3	33.0	34.8	39.9	37.8	37.4	33.9	38.6	+4.7
27–30	15.4	19.5	17.2	22.2	23.1	26.1	23.2	27.1	27.4	24.8	27.7	22.8	29.3	33.4	35.2	34.4	30.1	35.9	+5.8
% saying often exposed																			
18	9.9	11.7	10.5	11.9	12.6	10.8	11.4	10.6	11.4	10.8	8.2	9.4	10.2	11.5	11.6	9.3	9.7	9.2	-0.5
19–22	7.0	4.8	6.4	7.8	8.6	5.2	7.9	8.0	6.7	6.9	6.6	6.8	6.6	6.9	10.1	8.1	9.4	7.0	-2.3
23–26	3.1	4.3	3.5	3.4	5.0	5.4	5.4	4.0	5.4	6.7	5.4	3.8	6.4	6.3	7.6	5.8	7.0	5.8	-1.2
27–30	1.0	2.5	1.6	3.7	4.7	4.9	2.4	5.6	4.0	3.4	2.3	3.0	4.8	4.2	4.5	4.8	4.9	6.6	+1.6
Marijuana																			
% saying any																			
18	75.5	75.8	73.8	74.9	74.2	71.4	72.2	70.8	71.4	68.4	69.8	71.8	74.2	74.6	75.1	73.7	73.4	73.2	-0.2
19–22	67.1	63.5	63.9	68.0	64.6	64.8	65.1	66.8	65.4	66.3	64.3	67.5	64.9	65.7	67.6	69.0	71.1	70.3	-0.8
23–26	48.8	48.1	51.8	54.2	53.5	54.4	50.6	49.7	51.9	53.3	54.0	55.5	54.0	57.9	63.9	63.4	61.1	63.6	+2.6
27–30	35.7	38.7	38.8	37.0	44.6	44.1	40.4	42.4	44.1	40.7	44.8	39.8	43.5	46.1	56.0	52.3	54.4	53.3	-1.2
% saying often exposed																			
18	31.4	34.4	30.3	30.8	30.7	30.4	28.0	27.0	27.8	25.1	27.0	29.3	31.3	32.3	32.2	30.6	29.2	30.5	+1.3
19–22	22.8	23.0	20.4	24.5	24.8	24.2	24.5	23.6	23.1	20.1	18.3	22.6	25.2	22.9	24.2	22.6	28.2	25.7	-2.5
23–26	13.6	13.2	15.2	15.6	14.9	16.2	13.7	17.8	12.5	16.2	13.7	13.5	17.0	18.0	19.7	18.3	18.8	21.2	+2.5
27–30	8.1	8.8	8.6	8.4	11.7	11.7	9.6	12.2	11.5	8.2	8.5	12.3	10.8	10.9	13.9	16.0	14.7	16.5	+1.8
LSD																			
% saying any																			
18	23.1	23.6	22.0	21.6	17.2	14.2	12.4	10.8	11.6	12.4	12.1	11.9	14.1	13.5	13.0	13.8	12.9	15.7	+2.8 s
19–22	21.0	20.1	15.9	15.2	13.6	10.0	8.5	7.2	10.4	6.3	9.2	9.1	9.7	10.1	12.2	10.0	13.1	13.4	+0.3
23–26	9.8	9.4	9.8	11.1	9.3	5.5	4.4	4.7	5.6	4.5	4.8	3.7	5.7	8.9	9.6	8.3	7.6	6.1	-1.5
27–30	3.2	3.7	3.2	4.3	4.8	3.0	4.7	4.0	3.4	3.9	1.7	3.8	4.2	4.1	4.2	4.7	4.6	7.7	+3.1
% saying often exposed																			
18	3.2	4.1	3.3	2.8	2.6	1.8	1.6	1.5	1.9	1.7	0.8	1.3	1.4	1.4	1.6	1.5	1.5	1.9	+0.5
19–22	2.0	1.7	1.4	2.4	0.9	0.2	0.1	0.7	0.7	0.3	0.7	0.3	0.1	0.2	0.6	0.9	0.4	0.9	+0.5
23–26	0.1	0.3	0.2	*	0.3	0.3	*	0.3	*	0.5	0.6	*	0.6	0.3	1.4	0.1	0.8	0.1	-0.6
27–30	*	0.1	*	*	*	0.3	0.3	0.6	*	0.1	*	0.3	0.5	0.5	0.6	1.0	0.3	0.9	+0.5
Other hallucinogens [c]																			
% saying any																			
18	15.9	17.7	16.3	28.1	26.4	25.8	24.8	24.3	23.8	23.5	23.6	22.0	25.0	23.8	22.7	22.3	19.8	20.4	+0.6
19–22	15.0	12.4	11.8	22.8	23.4	18.9	18.7	19.5	17.8	20.2	17.5	17.5	19.6	17.5	17.0	14.6	19.1	17.1	-2.0
23–26	8.7	5.8	8.9	14.8	14.7	11.9	10.1	11.3	10.3	9.8	9.8	9.9	12.5	13.8	13.6	14.6	10.3	11.8	+1.5
27–30	2.6	3.0	3.0	6.4	7.7	6.3	7.9	8.8	7.8	6.8	5.2	7.5	5.0	8.1	7.8	7.2	8.3	12.0	+3.7
% saying often exposed																			
18	1.7	2.7	2.1	3.6	4.5	3.2	3.2	2.6	4.1	3.0	1.9	2.7	2.2	2.5	2.7	2.4	1.9	1.9	0.0
19–22	0.5	0.6	0.8	2.6	2.4	0.4	0.7	1.2	0.7	0.7	0.9	0.9	1.1	1.3	0.8	*	0.9	0.6	-0.3
23–26	*	*	0.4	0.2	0.4	*	*	0.5	*	0.6	0.7	0.1	0.7	0.3	1.1	0.3	1.1	*	-1.1
27–30	*	0.1	*	0.4	*	*	0.3	0.6	*	0.4	0.3	0.3	0.7	0.5	0.8	0.9	0.9	1.2	+0.4

↓
(List of drugs continued.)

TABLE 7-3 (cont.)
Trends in Exposure to Drug Use
among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

Q. During the LAST 12 MONTHS how often have you been around people who were taking each of the following to get high or for "kicks"?

Percentage saying exposed to drug [a]

Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Cocaine																		
% saying any																		
18	37.7	36.3	34.9	33.3	35.6	38.3	37.4	34.9	30.2	30.2	27.7	21.3	19.8	19.2	18.8	21.6	25.0	25.6
19–22	37.6	42.3	43.6	36.6	38.9	39.4	41.5	37.0	36.2	26.6	24.0	18.5	19.8	13.5	14.7	14.1	19.3	18.8
23–26	—	—	—	—	38.5	40.6	42.0	34.5	35.9	28.0	24.0	19.9	16.7	14.6	14.3	14.1	12.5	14.0
27–30	—	—	—	—	—	—	—	—	28.9	28.3	24.2	18.6	19.4	16.6	14.3	11.4	12.1	11.4
% saying often exposed																		
18	5.9	6.6	6.6	5.2	6.7	7.1	7.8	5.9	5.1	5.4	4.7	3.4	2.7	2.9	2.5	3.2	4.0	4.2
19–22	5.8	7.6	6.5	4.3	6.5	7.0	5.4	5.2	4.8	4.3	2.2	1.6	1.7	1.7	1.8	1.7	1.2	2.4
23–26	—	—	—	—	5.3	8.5	7.0	6.0	5.4	3.5	2.5	1.7	1.4	1.7	1.0	1.7	1.3	1.8
27–30	—	—	—	—	—	—	—	—	4.4	3.9	2.9	2.2	2.0	1.2	1.5	1.4	1.9	1.6
Heroin																		
% saying any																		
18	7.4	6.6	7.1	5.1	6.0	5.5	6.0	5.8	5.7	6.5	5.4	5.1	5.4	5.7	7.3	7.9	8.6	9.1
19–22	4.4	3.3	4.1	2.9	3.1	4.8	2.9	2.9	2.9	2.9	2.5	3.0	2.7	2.0	3.7	3.8	3.6	3.7
23–26	—	—	—	—	2.3	3.3	3.2	2.9	1.7	2.3	2.3	1.8	1.7	1.5	1.9	2.8	2.9	2.7
27–30	—	—	—	—	—	—	—	—	2.1	1.4	1.5	0.9	1.0	2.0	2.0	1.7	1.5	1.3
% saying often exposed																		
18	0.4	0.6	1.0	0.7	1.1	0.5	1.0	0.9	0.8	1.0	0.5	0.9	0.7	1.1	0.7	1.2	1.6	1.2
19–22	0.2	0.3	0.3	0.1	0.2	0.5	0.2	0.1	0.2	0.1	0.2	0.4	0.6	0.4	0.6	1.2	0.2	0.4
23–26	—	—	—	—	*	0.7	0.3	0.6	0.4	0.3	0.6	0.3	*	*	*	0.2	0.2	0.3
27–30	—	—	—	—	—	—	—	—	0.3	0.3	0.5	0.2	0.2	0.9	0.3	0.6	0.6	*
Other narcotics [d]																		
% saying any																		
18	19.6	17.5	18.5	17.3	18.0	18.4	15.6	14.4	14.8	13.8	14.2	11.3	11.1	12.4	14.9	15.5	18.5	20.4
19–22	14.4	14.4	15.2	10.9	12.4	13.7	9.8	12.2	11.2	9.0	9.4	9.2	8.5	6.8	10.1	12.1	11.5	14.5
23–26	—	—	—	—	9.0	12.3	9.2	9.7	7.4	8.0	5.9	8.3	7.0	4.6	6.9	7.8	7.4	6.5
27–30	—	—	—	—	—	—	—	—	6.5	6.5	5.8	5.5	3.7	5.6	5.9	5.7	4.7	4.9
% saying often exposed																		
18	1.7	1.7	2.4	2.2	2.0	1.8	2.1	1.7	1.7	1.7	1.6	1.4	1.3	1.7	1.7	2.1	3.4	2.5
19–22	0.7	0.5	0.5	0.9	0.7	1.0	0.5	0.4	0.9	0.3	0.2	1.0	0.9	0.6	0.8	1.4	0.7	1.5
23–26	—	—	—	—	0.4	0.5	1.3	0.8	0.8	0.5	1.6	0.7	0.1	0.3	0.1	0.1	0.3	0.7
27–30	—	—	—	—	—	—	—	—	0.7	0.5	1.0	0.3	0.8	1.2	0.8	0.8	0.7	0.5
Amphetamines																		
% saying any																		
18	40.8	49.5	50.2	46.1	45.0	41.0	36.5	31.7	27.9	27.4	28.3	23.6	24.5	24.7	28.2	28.1	31.5	31.0
19–22	42.3	48.6	48.4	39.7	41.3	35.9	31.3	26.7	21.2	18.5	19.5	17.4	21.3	15.1	20.3	21.0	22.3	24.6
23–26	—	—	—	—	32.3	30.5	29.1	20.9	18.8	14.0	16.8	14.6	11.8	13.2	11.2	13.0	11.1	11.7
27–30	—	—	—	—	—	—	—	—	15.6	14.3	13.5	10.7	11.4	11.3	11.0	10.6	7.6	9.1
% saying often exposed																		
18	8.3	12.1	12.3	10.1	9.0	6.5	5.8	4.5	4.1	4.7	4.1	3.1	3.0	3.9	4.1	4.5	5.6	5.2
19–22	7.4	9.9	7.7	6.9	5.4	4.4	3.1	3.3	2.2	1.5	1.1	1.9	2.6	1.5	3.3	5.0	1.3	4.1
23–26	—	—	—	—	3.9	3.2	2.2	3.3	1.9	0.7	2.0	1.3	0.2	0.8	0.9	1.6	1.3	1.4
27–30	—	—	—	—	—	—	—	—	2.0	2.0	1.2	0.8	0.8	1.3	0.7	1.6	1.8	1.0

(Table continued on next page.)

TABLE 7-3 (cont.)
Trends in Exposure to Drug Use
among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

Q. During the LAST 12 MONTHS how often have you been around people who were taking each of the following to get high or for "kicks"?	Age Group	Percentage saying exposed to drug [a]																		2014–2015 change
		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	
Cocaine																				
% saying any	18	26.6	25.8	24.2	24.5	24.9	24.8	24.4	25.7	28.2	25.2	24.1	20.0	20.0	19.3	17.4	16.7	17.6	18.0	+0.4
	19–22	21.6	18.5	19.1	20.6	22.5	18.4	23.6	22.7	22.9	22.5	22.7	18.6	17.8	15.5	18.9	11.5	17.6	18.0	+0.4
	23–26	16.0	18.2	16.4	16.9	18.3	17.4	18.7	19.2	19.3	19.0	18.2	15.3	14.7	20.5	17.2	14.4	15.6	15.7	0.0
	27–30	8.6	11.6	10.2	11.6	12.2	12.6	13.0	15.8	16.0	14.1	14.8	13.2	11.4	13.1	14.2	15.0	12.1	17.8	+5.7 ~
% saying often exposed	18	3.7	4.6	4.6	4.5	5.3	5.0	4.7	4.2	5.3	4.6	3.6	2.6	2.1	2.3	2.8	2.1	2.2	2.3	+0.1
	19–22	3.2	1.4	3.8	3.0	4.1	1.6	2.6	4.0	2.6	1.8	2.6	2.6	0.7	1.2	3.2	1.7	2.4	1.2	-1.2
	23–26	1.5	2.2	1.8	1.0	2.5	1.9	2.9	1.8	2.0	3.2	1.0	1.0	1.2	1.4	2.0	1.0	2.1	0.8	-1.3
	27–30	0.8	1.5	0.3	1.6	2.4	1.7	0.7	2.4	0.8	0.7	1.4	0.8	0.1	1.4	0.8	1.6	1.8	2.0	+0.2
Heroin																				
% saying any	18	8.7	8.1	9.1	8.7	8.3	7.3	6.6	7.3	9.0	8.6	6.8	7.3	8.3	6.4	6.0	6.6	5.2	5.6	+0.4
	19–22	6.4	3.2	5.2	3.2	5.3	3.4	3.0	3.2	3.7	3.3	4.8	4.3	3.2	4.0	3.6	3.4	3.6	3.2	-0.4
	23–26	3.1	2.9	2.6	2.4	3.8	2.0	3.1	2.6	3.5	3.6	1.8	1.8	4.1	4.8	2.4	2.3	2.4	3.9	+1.5
	27–30	1.4	1.9	1.9	2.3	2.7	1.3	3.2	2.9	2.3	3.0	2.2	1.9	1.5	3.5	3.0	3.9	5.3	2.6	-2.7
% saying often exposed	18	0.9	1.3	1.5	0.7	1.3	1.2	1.2	0.8	1.7	1.1	0.8	0.8	1.0	1.1	1.3	0.7	0.7	1.2	+0.5
	19–22	0.7	0.8	0.7	0.8	0.6	0.2	*	0.8	0.1	*	0.6	*	0.4	0.7	1.0	1.0	0.9	*	-0.9
	23–26	0.5	1.0	*	*	0.8	0.5	0.5	0.3	0.6	0.3	*	*	1.2	0.3	0.2	*	0.3	1.1	+0.8
	27–30	*	0.2	*	*	0.7	0.3	*	0.4	0.3	0.4	0.3	0.6	*	1.2	0.7	1.3	0.5	1.0	+0.5
Other narcotics [d]																				
% saying any	18	20.7	21.9	21.1	21.6	22.5	21.8	20.3	19.0	18.9	18.9	16.3	16.3	30.3	27.5	27.1	22.9	20.9	21.0	+0.1
	19–22	15.3	13.9	17.0	18.3	18.7	13.6	14.5	16.8	15.3	12.5	13.2	14.2	27.5	23.7	25.2	19.5	21.3	17.8	-3.6
	23–26	8.1	9.4	10.9	12.2	12.0	12.6	12.6	12.4	13.0	14.4	11.2	13.2	25.9	25.3	24.1	22.5	17.8	19.6	+1.8
	27–30	3.6	5.2	6.5	9.0	7.9	9.5	8.8	11.6	10.6	9.2	9.1	9.7	23.4	22.7	23.6	24.5	19.4	19.1	-0.3
% saying often exposed	18	2.8	3.9	2.9	3.0	3.8	3.0	3.3	2.6	3.4	3.4	2.1	2.7	5.3	5.6	5.7	3.8	3.6	2.8	-0.9
	19–22	1.7	1.1	2.4	1.6	3.0	1.2	0.8	2.4	1.9	1.7	1.9	1.6	3.3	2.1	1.6	2.2	2.0	1.7	-0.3
	23–26	0.5	1.1	0.7	1.0	0.9	1.6	1.4	1.3	1.1	1.8	1.0	1.3	4.4	2.5	3.6	1.5	2.3	2.0	-0.2
	27–30	*	0.2	1.1	1.0	0.7	1.2	0.1	1.7	0.7	0.8	0.4	1.4	3.0	3.1	2.3	3.1	2.6	2.3	-0.4
Amphetamines [e]																				
% saying any	18	29.9	30.1	29.5	31.5	30.6	27.4	27.2	26.4	26.6	23.8	23.3	23.8	23.6	28.0	26.2	25.4	23.7	25.7	+2.0
	19–22	24.8	21.2	24.8	23.3	25.5	21.6	23.7	22.2	22.7	22.8	17.6	18.0	19.4	26.0	27.4	26.2	30.4	30.3	-0.1
	23–26	14.6	12.3	18.5	18.2	17.9	15.4	18.8	15.6	18.7	16.6	13.7	15.3	15.8	24.2	23.1	21.4	22.0	23.5	+1.4
	27–30	6.6	10.4	7.4	11.1	11.5	12.2	11.4	12.2	14.1	10.0	10.3	10.3	12.6	16.4	19.0	19.1	17.7	23.1	+5.4
% saying often exposed	18	4.7	6.3	4.4	6.0	6.4	4.9	5.3	4.1	5.6	4.3	3.0	4.3	3.3	6.1	5.7	5.3	5.7	5.2	-0.6
	19–22	2.9	2.2	2.4	2.6	5.6	1.7	4.1	3.1	2.9	2.3	2.1	3.0	3.9	3.3	5.5	3.7	6.8	5.4	-1.4
	23–26	2.2	1.7	1.4	2.2	0.7	1.3	1.7	1.6	2.6	1.6	1.8	1.1	1.6	3.1	4.1	3.2	3.6	2.3	-1.2
	27–30	0.2	1.1	0.4	0.6	1.5	1.0	1.2	1.0	0.8	1.1	0.3	0.7	0.6	1.7	3.0	2.7	2.0	3.5	+1.4

(List of drugs continued.)

TABLE 7-3 (cont.)
Trends in Exposure to Drug Use
among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

Q. During the LAST 12 MONTHS how often have you been around people who were taking each of the following to get high or for "kicks"?

Percentage saying exposed to drug [a]

	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Sedatives/barbiturates [e]																			
% saying any	18	25.2	25.9	25.7	22.5	21.2	18.9	15.8	13.1	12.4	11.8	13.3	10.0	10.2	11.9	13.0	14.5	15.5	16.1
	19–22	25.6	23.1	21.8	18.3	15.7	14.7	12.8	12.0	8.2	8.3	6.5	7.9	7.3	7.2	7.4	10.1	8.8	11.7
	23–26	—	—	—	—	16.1	13.1	11.0	7.1	7.1	6.6	6.9	5.9	6.5	3.8	4.2	5.7	6.6	4.9
	27–30	—	—	—	—	—	—	—	—	8.0	6.8	5.9	5.4	5.2	5.7	4.5	5.2	3.5	3.8
% saying often exposed	18	3.4	4.0	4.3	3.0	2.7	1.7	2.1	1.5	1.4	1.7	1.7	1.2	1.1	1.6	1.7	2.0	2.9	2.5
	19–22	2.5	2.8	1.1	1.4	0.7	1.3	0.5	0.7	0.7	0.3	0.7	0.4	0.7	0.7	1.3	1.3	0.4	0.9
	23–26	—	—	—	—	0.7	0.9	1.7	0.8	0.6	0.3	1.1	0.3	0.3	*	*	0.2	0.3	0.8
	27–30	—	—	—	—	—	—	—	—	0.7	0.4	0.6	0.2	0.4	1.2	0.2	0.6	0.5	0.2
Tranquilizers [f]																			
% saying any	18	29.1	29.0	26.6	23.5	23.1	23.4	19.6	18.4	18.2	15.1	16.3	14.2	12.7	13.8	16.5	15.7	17.9	18.9
	19–22	29.6	26.9	28.5	19.5	21.2	19.5	16.4	18.5	13.8	12.0	12.7	12.6	11.0	10.0	12.0	11.8	10.7	15.6
	23–26	—	—	—	—	23.1	21.0	16.9	15.9	13.4	12.9	12.0	10.4	9.7	10.9	9.8	10.3	10.1	9.4
	27–30	—	—	—	—	—	—	—	—	15.0	11.6	11.1	9.7	10.3	10.4	9.0	11.2	9.6	9.6
% saying often exposed	18	3.2	4.2	3.5	2.9	2.9	2.2	2.5	2.6	2.2	2.1	1.9	1.4	1.9	1.7	1.8	2.3	3.5	3.2
	19–22	3.2	2.6	1.8	2.1	1.5	1.7	0.9	1.1	1.8	1.0	1.1	1.1	1.5	1.1	1.3	1.5	0.5	1.3
	23–26	—	—	—	—	2.0	1.6	2.6	1.8	1.2	0.8	0.5	1.0	0.6	0.7	0.1	1.1	1.5	0.7
	27–30	—	—	—	—	—	—	—	—	1.4	0.3	1.7	0.8	1.3	1.3	1.0	1.1	0.8	1.2
Alcoholic beverages																			
% saying any	18	94.7	94.0	94.0	94.0	94.0	94.0	94.1	93.9	93.1	92.3	93.6	91.7	90.6	91.8	90.0	91.2	91.5	91.4
	19–22	94.3	93.8	94.5	93.4	94.2	92.7	93.6	94.4	92.5	91.8	92.4	94.0	93.3	92.9	93.7	93.1	93.7	93.1
	23–26	—	—	—	—	90.3	92.7	91.4	90.6	91.1	92.9	91.3	91.0	91.4	90.3	89.5	91.9	89.6	93.1
	27–30	—	—	—	—	—	—	—	—	87.1	88.4	86.2	87.7	87.3	86.6	86.2	89.3	89.2	86.4
% saying often exposed	18	60.2	61.0	59.3	60.2	58.7	59.5	58.0	58.7	56.4	55.5	56.1	54.5	53.1	51.9	54.0	54.0	54.5	53.9
	19–22	59.6	61.2	62.5	56.6	59.3	61.8	59.9	61.4	55.4	53.8	56.0	53.9	56.1	56.8	57.0	56.3	52.3	54.2
	23–26	—	—	—	—	52.1	54.8	51.4	53.0	48.1	50.9	49.7	48.4	45.4	45.4	43.3	47.5	44.8	49.8
	27–30	—	—	—	—	—	—	—	—	39.9	39.5	38.7	38.0	39.9	38.1	39.3	38.0	34.7	37.1
Approximate	18	*3,259*	*3,608*	*3,645*	*3,334*	*3,238*	*3,252*	*3,078*	*3,296*	*3,300*	*2,795*	*2,556*	*2,525*	*2,630*	*2,730*	*2,581*	*2,608*	*2,407*	*2,595*
Weighted N =	19–22	*582*	*574*	*601*	*569*	*578*	*549*	*591*	*582*	*556*	*567*	*567*	*532*	*528*	*489*	*460*	*464*	*485*	*471*
	23–26					*533*	*532*	*557*	*529*	*531*	*514*	*523*	*494*	*532*	*513*	*471*	*467*	*447*	*424*
	27–30									*522*	*507*	*506*	*478*	*502*	*457*	*425*	*452*	*432*	*455*

(Table continued on next page.)

TABLE 7-3 (cont.)
Trends in Exposure to Drug Use
among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

Q. During the LAST 12 MONTHS how often have you been around people who were taking each of the following to get high or for "kicks"?

Percentage saying exposed to drug [a]

	Age Group	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Sedatives/barbiturates [f]																				
% saying any	18	16.1	17.1	16.3	17.1	17.7	14.8	21.5	20.4	21.3	18.8	16.7	17.6	18.8	16.2	16.0	15.0	13.4	13.5	+0.1
	19–22	13.4	11.6	13.1	13.1	16.0	11.9	17.2	17.8	16.0	16.1	15.2	17.3	16.1	12.2	14.8	10.7	14.2	13.1	-1.1
	23–26	8.5	7.1	9.3	9.0	9.8	7.9	15.9	12.5	14.8	13.1	12.4	12.7	13.4	15.2	14.9	10.6	11.9	11.5	-0.4
	27–30	2.7	4.1	2.9	5.3	6.0	6.1	9.2	12.4	11.9	10.3	10.1	9.9	11.6	10.4	11.7	10.1	11.8	12.1	+0.3
% saying often exposed	18	2.7	3.8	2.7	2.7	4.6	2.8	4.1	3.7	3.9	3.9	2.1	3.4	2.5	3.1	2.9	2.5	2.3	1.8	-0.5
	19–22	1.4	0.9	1.6	1.2	1.8	0.8	1.7	2.1	2.5	1.4	2.2	1.9	0.9	1.2	1.7	1.0	1.5	1.9	+0.4
	23–26	0.5	0.9	0.7	0.2	0.3	0.4	0.7	1.1	1.1	1.6	1.7	0.7	1.0	1.0	1.5	0.8	1.3	0.5	-0.8
	27–30	*	0.6	0.2	0.9	0.4	0.6	0.4	1.7	0.7	1.3	0.4	1.7	0.9	1.3	1.1	2.0	0.6	1.4	+0.8
Tranquilizers [g]																				
% saying any	18	17.3	18.2	17.7	23.8	22.7	21.0	22.1	20.9	21.8	19.3	19.9	20.0	18.2	17.0	17.6	16.4	16.0	19.7	+3.7 s
	19–22	16.9	14.3	18.5	21.3	23.6	20.0	21.9	20.6	23.1	21.4	20.0	19.6	18.1	16.6	19.0	13.3	18.3	16.8	-1.5
	23–26	10.9	10.8	12.3	16.4	20.1	18.7	19.9	20.1	19.9	18.8	18.4	17.5	21.4	19.6	21.0	19.5	15.5	17.9	+2.4
	27–30	6.1	8.8	7.6	12.6	13.6	15.3	14.6	18.1	19.2	16.7	16.8	13.5	18.6	16.5	19.5	17.5	16.3	17.4	+1.1
% saying often exposed	18	2.8	3.7	3.5	4.9	5.8	4.2	4.1	4.5	5.4	4.9	3.7	3.9	2.8	3.4	3.3	3.4	3.4	2.6	-0.8
	19–22	1.6	1.5	1.7	3.1	3.6	2.3	2.7	2.7	3.2	3.0	3.2	2.1	1.7	2.9	2.0	1.7	2.3	2.0	-0.2
	23–26	1.1	1.5	1.7	1.3	2.1	1.6	2.0	1.3	2.6	2.4	3.6	1.5	3.2	2.6	2.5	1.6	1.8	1.2	-0.6
	27–30	0.2	0.9	0.4	1.6	1.6	1.9	0.8	3.5	2.9	2.6	1.0	2.0	1.7	2.0	2.3	1.8	1.9	3.6	+1.6
Alcoholic beverages																				
% saying any	18	92.2	91.8	90.7	90.8	89.5	88.3	87.6	87.4	87.6	86.5	85.7	86.5	85.2	85.0	85.3	84.8	82.1	80.5	-1.6
	19–22	91.8	91.0	93.3	94.3	93.7	93.6	92.5	92.7	92.0	91.8	90.5	91.2	86.5	87.5	85.8	82.8	89.7	85.5	-4.2
	23–26	89.1	91.5	92.1	90.1	91.9	91.8	92.2	90.0	94.0	94.5	92.0	93.0	91.1	94.2	88.7	88.7	82.7	87.2	+4.6
	27–30	88.4	88.7	89.8	91.2	89.0	90.0	85.3	92.2	91.8	89.6	94.4	91.0	91.2	92.5	90.5	88.8	85.6	89.3	+3.7
% saying often exposed	18	54.5	53.5	50.2	52.7	50.8	49.0	48.2	49.1	47.8	46.4	45.4	46.3	45.8	40.7	43.0	41.7	40.3	38.0	-2.2
	19–22	57.9	54.7	54.3	53.4	54.9	55.7	54.3	58.9	55.0	60.7	53.9	53.4	48.5	46.0	50.6	45.3	49.5	51.1	+1.6
	23–26	44.6	45.7	49.6	48.8	46.3	50.5	48.3	46.4	57.1	54.2	49.6	53.8	51.3	52.5	55.6	49.3	44.4	49.3	+4.9
	27–30	36.6	38.3	34.4	40.0	39.6	40.6	36.8	43.6	47.3	44.3	47.8	45.2	43.0	49.3	50.4	48.1	47.7	47.4	-0.3
Approximate Weighted N =	18	*2,541*	*2,312*	*2,153*	*2,147*	*2,162*	*2,454*	*2,456*	*2,469*	*2,469*	*2,448*	*2,332*	*2,274*	*2,434*	*2,372*	*2,299*	*2,150*	*2,075*	*2,177*	
	19–22	*445*	*450*	*415*	*412*	*403*	*396*	*432*	*377*	*378*	*333*	*365*	*368*	*364*	*340*	*356*	*281*	*316*	*264*	
	23–26	*400*	*398*	*389*	*406*	*345*	*385*	*404*	*374*	*363*	*327*	*333*	*328*	*347*	*308*	*334*	*311*	*308*	*286*	
	27–30	*449*	*430*	*395*	*369*	*359*	*347*	*370*	*370*	*330*	*356*	*339*	*324*	*336*	*306*	*312*	*301*	*303*	*263*	

Source. The Monitoring the Future study, the University of Michigan.

Notes. Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding. ' — ' indicates data not available.

' * ' indicates a prevalence rate of less than 0.05%.

[a] Answer alternatives were: (1) Not at all, (2) Once or twice, (3) Occasionally, (4) Often. The "any" percentage combines categories (2)–(4).

[b] These estimates were derived from responses to the question for the following drugs: marijuana, LSD, other hallucinogens, cocaine, heroin or other narcotics, amphetamines, sedatives (barbiturates), and tranquilizers.

[c] In 2001 the question text was changed from other psychedelics to other hallucinogens, and shrooms was added to the list of examples. These changes likely explain the discontinuity in the 2001 results.

[d] In 2010 the list of examples for narcotics other than heroin was changed from methadone, opium to Vicodin, OxyContin, Percocet, etc. This change likely explains the discontinuity in the 2010 results.

[e] In 2011 pep pills and bennies were replaced in the list of examples by Adderall and Ritalin. This change likely explains the discontinuity in the 2011 results.

[f] In 2004 the question text was changed from barbiturates to sedatives/barbiturates and the list of examples was changed from downers, goofballs, reds, yellows, etc. to just downers. These changes likely explain the discontinuity in the 2004 results.

[g] In 2001 Xanax was added to the list of examples. This change likely explains the discontinuity in the 2001 results.

TABLE 7-4
Trends in Availability of Drugs as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, 45, 50, and 55

Q. How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?

Percentage saying fairly easy or very easy to get [a]

	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Marijuana	18	89.0	89.2	88.5	86.2	84.6	85.5	85.2	84.8	85.0	84.3	84.4	83.3	82.7	83.0	85.5	88.5	88.7	89.6
	19–22	95.6	91.1	92.4	89.7	88.3	89.5	87.2	85.9	87.1	87.1	86.2	86.0	87.8	85.6	87.2	87.9	89.3	90.6
	23–26	—	—	—	—	92.5	88.8	88.8	90.3	86.9	88.7	83.3	82.5	83.8	84.6	87.1	86.2	85.3	84.4
	27–30	—	—	—	—	—	—	—	—	89.3	86.0	83.1	83.8	80.7	82.8	80.3	83.3	82.6	84.5
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	75.7	75.6	73.0	77.1
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Amyl & butyl nitrites	18	—	—	—	—	—	—	—	23.9	25.9	26.8	24.4	22.7	25.9	25.9	26.7	26.0	23.9	23.8
	19–22	—	—	—	—	—	—	—	22.8	26.0	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	—	—	—	23.1	28.0	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	26.7	—	—	—	—	—	—	—	—	—
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
LSD	18	35.3	35.0	34.2	30.9	30.6	30.5	28.5	31.4	33.3	38.3	40.7	39.5	44.5	49.2	50.8	53.8	51.3	50.7
	19–22	39.6	38.4	35.1	31.8	32.7	29.6	30.5	29.9	33.9	36.4	36.6	37.8	42.5	44.9	43.7	50.5	50.8	47.7
	23–26	—	—	—	—	32.7	29.1	30.0	27.5	32.7	32.6	30.2	32.8	33.5	33.4	40.1	41.0	43.6	39.2
	27–30	—	—	—	—	—	—	—	—	29.4	29.9	32.3	27.0	30.9	30.5	27.2	35.6	33.6	35.2
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	33.8	32.4	28.4	32.9
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other hallucinogens [b]	18	35.0	32.7	30.6	26.6	26.6	26.1	24.9	25.0	26.2	28.2	28.3	28.0	29.9	33.5	33.8	35.8	33.9	33.9
	19–22	42.1	37.7	33.5	31.0	28.9	28.7	26.3	27.5	28.7	28.1	28.9	26.6	28.3	29.5	28.6	31.5	31.5	33.4
	23–26	—	—	—	—	31.8	29.6	26.4	25.6	29.6	28.7	27.0	25.7	27.7	25.3	28.3	29.2	32.6	31.0
	27–30	—	—	—	—	—	—	—	—	28.6	29.6	30.8	24.9	24.8	25.4	24.7	29.3	25.9	28.0
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
PCP	18	—	—	—	—	—	—	—	22.8	24.9	28.9	27.7	27.6	31.7	31.7	31.4	31.0	30.5	30.0
	19–22	—	—	—	—	—	—	—	21.7	24.6	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	—	—	—	21.2	27.6	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	24.3	—	—	—	—	—	—	—	—	—
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ecstasy (MDMA)	18	—	—	—	—	—	—	—	—	—	21.7	22.0	22.1	24.2	28.1	31.2	34.2	36.9	38.8
	19–22	—	—	—	—	—	—	—	—	—	—	26.6	24.9	27.1	23.9	27.0	29.3	33.4	35.6
	23–26	—	—	—	—	—	—	—	—	—	—	21.4	23.1	26.4	24.0	26.0	27.8	28.7	31.1
	27–30	—	—	—	—	—	—	—	—	—	—	27.1	20.8	22.2	22.8	21.9	27.1	29.3	24.3
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

(Years Cont.)

(Table continued on next page.)

TABLE 7-4 (cont.)
Trends in Availability of Drugs as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, 45, 50, and 55

Q. How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?

Percentage saying fairly easy or very easy to get [a]

	Age Group	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Marijuana	18	90.4	88.9	88.5	88.5	87.2	87.1	85.8	85.6	84.9	83.9	83.9	81.1	82.1	82.2	81.6	81.4	81.3	79.5	-1.8
	19–22	89.9	87.4	89.6	91.7	88.1	87.7	87.3	88.0	86.8	88.4	87.5	83.0	84.2	82.9	85.4	83.9	85.7	88.7	+3.0
	23–26	87.5	85.9	88.4	87.0	89.1	87.2	88.8	87.0	86.8	87.6	85.3	89.4	83.3	88.3	87.0	87.4	87.7	87.4	-0.2
	27–30	82.1	83.0	81.5	84.8	83.6	81.8	86.0	84.6	87.6	87.8	86.4	88.9	84.6	85.6	85.1	86.8	86.4	91.5	+5.1
	35	76.0	74.9	77.1	75.3	76.5	75.1	75.6	73.8	75.1	75.5	76.4	75.7	75.6	80.4	80.5	80.2	84.4	85.5	+1.2
	40	73.4	71.7	73.1	70.4	72.1	72.3	68.9	73.6	69.7	71.2	72.5	72.9	73.6	74.6	74.6	78.8	76.0	77.3	+1.3
	45	—	—	—	—	—	68.5	69.9	70.1	67.9	70.1	68.1	67.9	73.4	69.8	71.8	73.6	76.9	77.2	+0.3
	50	—	—	—	—	—	—	—	—	—	—	64.4	65.8	67.9	65.8	68.9	70.1	71.9	75.8	+3.9
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	68.8	72.1	71.7	-0.5
Amyl & butyl nitrites	18	25.1	21.4	23.3	22.5	22.3	19.7	20.0	19.7	18.4	18.1	16.9	15.7	—	—	—	—	—	—	—
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
LSD	18	48.8	44.7	46.9	44.7	39.6	33.6	33.1	28.6	29.0	28.7	28.5	26.3	25.1	25.1	27.6	24.5	25.9	26.5	+0.6
	19–22	51.1	43.8	47.1	42.5	37.9	34.1	30.3	27.7	29.0	23.0	19.7	24.2	26.1	24.8	23.2	26.2	22.3	25.8	+3.5
	23–26	40.4	41.2	40.4	38.3	37.2	34.1	38.5	26.5	30.3	25.2	24.1	26.1	24.2	21.4	19.3	22.8	17.2	20.5	+3.3
	27–30	32.9	35.7	35.6	38.3	32.3	33.5	30.0	29.3	29.7	26.8	28.1	22.5	25.2	26.6	19.1	21.7	21.1	15.5	-5.6
	35	31.2	27.7	32.2	28.7	29.1	29.8	25.6	24.0	28.7	26.6	26.4	26.9	25.5	24.0	23.0	24.1	22.2	19.3	-2.9
	40	31.1	31.0	28.5	25.7	27.4	25.0	24.4	24.3	23.9	21.5	25.1	22.2	23.3	22.6	21.6	20.1	23.0	20.6	-2.4
	45	—	—	—	—	—	24.2	27.0	25.4	23.7	23.6	21.1	19.4	23.6	21.3	18.9	23.4	21.2	17.9	-3.2
	50	—	—	—	—	—	—	—	—	—	—	19.0	21.9	18.6	20.3	18.1	17.1	17.7	19.7	+1.9
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other hallucinogens [b]	18	35.1	29.5	34.5	48.5	47.7	47.2	49.4	45.0	43.9	43.7	42.8	40.5	39.5	38.3	37.8	36.6	33.6	31.4	-2.1
	19–22	34.1	31.1	33.4	45.9	48.8	45.1	46.9	48.5	41.9	39.3	34.7	38.1	39.1	37.5	36.4	34.1	31.2	35.4	+4.2
	23–26	32.4	31.5	28.5	38.3	39.7	39.2	44.4	39.2	41.5	36.8	39.3	39.2	32.3	35.0	32.7	31.8	27.5	31.1	+3.6
	27–30	25.2	30.3	25.0	38.6	33.3	35.6	31.2	30.8	32.1	30.0	36.2	32.0	34.7	33.4	31.4	33.3	31.0	27.3	-3.7
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
PCP	18	30.7	26.7	28.8	27.2	25.8	21.9	24.2	23.2	23.1	21.0	20.6	19.2	18.5	17.2	14.2	15.3	11.0	13.8	+2.7 s
	19–22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23–26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	27–30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ecstasy (MDMA)	18	38.2	40.1	51.4	61.5	59.1	57.5	47.9	40.3	40.3	40.9	41.9	35.1	36.4	37.1	35.9	35.1	36.1	37.1	+1.0
	19–22	39.4	43.2	49.9	55.5	59.7	52.1	45.8	43.5	41.2	38.4	34.7	37.1	30.4	37.9	28.3	33.9	32.9	38.6	+5.8
	23–26	30.1	34.9	41.8	51.5	52.9	49.3	51.3	46.4	44.6	42.2	41.5	36.8	35.2	34.0	32.2	35.7	30.9	36.3	+5.3
	27–30	26.4	30.0	35.5	40.6	41.2	41.0	41.1	38.0	40.5	40.7	42.2	38.0	31.2	33.8	32.8	28.6	29.7	33.2	+3.6
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

↓
(List of drugs continued.)

TABLE 7-4 (cont.)
Trends in Availability of Drugs as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, 45, 50, and 55

Q. How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?

Percentage saying fairly easy or very easy to get [a]

	Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Cocaine	18	47.9	47.5	47.4	43.1	45.0	48.9	51.5	54.2	55.0	58.7	54.5	51.0	52.7	48.5	46.6	47.7	48.1	48.5
	19–22		56.2	57.1	55.2	56.2	56.9	60.4	65.0	64.9	66.8	61.7	54.3	54.5	49.2	49.9	49.4	44.4	49.7
	23–26	—	—	—	—	63.7	67.2	65.8	69.0	71.7	70.0	65.6	58.0	61.1	53.8	54.4	54.7	50.2	46.9
	27–30	—	—	—	—	—	—	—	—	68.6	68.2	64.0	60.0	63.1	56.8	53.1	57.0	53.0	50.4
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Crack	18	—	—	—	—	—	—	—	41.1	42.1	47.0	42.4	39.9	43.5	43.6	40.5	41.9	40.7	40.6
	19–22	—	—	—	—	—	—	—	41.9	47.3	47.2	46.9	42.1	42.1	38.4	41.6	40.7	32.9	39.9
	23–26	—	—	—	—	—	—	—	44.5	53.0	49.9	46.9	42.0	42.6	42.5	42.4	42.3	37.9	37.2
	27–30	—	—	—	—	—	—	—	—	46.5	46.8	46.8	43.1	45.2	45.8	41.1	44.7	39.9	36.5
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	49.6	48.2	43.1	44.3
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cocaine powder	18	—	—	—	—	—	—	—	52.9	50.3	53.7	49.0	46.0	48.0	45.4	43.7	43.8	44.4	43.3
	19–22	—	—	—	—	—	—	—	58.7	60.2	61.7	56.5	52.5	48.9	45.7	47.8	45.5	41.3	46.0
	23–26	—	—	—	—	—	—	—	64.9	69.1	60.1	58.6	53.2	56.4	50.5	49.7	49.6	45.9	43.6
	27–30	—	—	—	—	—	—	—	—	63.5	62.8	57.9	55.8	56.8	55.0	48.9	52.9	48.4	45.1
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	53.9	52.1	46.7	48.3
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Heroin	18	21.2	19.2	20.8	19.3	19.9	21.0	22.0	23.7	28.0	31.4	31.9	30.6	34.9	33.7	34.1	35.1	32.2	33.8
	19–22	18.9	19.4	19.3	16.4	17.2	20.8	21.2	24.4	28.5	31.6	30.7	25.3	30.2	30.0	33.2	35.2	29.1	31.4
	23–26	—	—	—	—	18.6	18.1	21.0	22.3	28.4	31.2	28.1	25.6	25.7	25.7	29.2	29.3	32.3	30.5
	27–30	—	—	—	—	—	—	—	—	23.6	27.4	29.5	22.1	25.6	28.5	24.4	30.7	29.5	30.0
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Some other narcotic [c]	18	29.4	29.6	30.4	30.0	32.1	33.1	32.2	33.0	35.8	38.3	38.1	34.6	37.1	37.5	38.0	39.8	40.0	38.9
	19–22	32.7	32.4	30.8	31.0	28.7	34.3	32.6	33.8	37.9	37.9	35.6	35.4	35.2	33.5	35.1	38.7	37.3	38.3
	23–26	—	—	—	—	32.8	32.1	33.6	32.2	35.9	36.4	34.7	33.2	33.9	33.1	35.8	32.6	36.7	35.7
	27–30	—	—	—	—	—	—	—	—	31.6	36.2	36.1	29.0	31.8	33.0	34.8	36.9	37.2	35.2
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Amphetamines	18	61.3	69.5	70.8	68.5	68.2	66.4	64.3	64.5	63.9	64.3	59.7	57.3	58.8	61.5	62.0	62.8	59.4	59.8
	19–22	71.7	72.6	73.5	69.7	69.1	69.1	63.1	61.8	61.3	62.2	57.7	58.3	56.3	56.0	56.6	60.3	56.9	55.5
	23–26	—	—	—	—	65.8	66.0	64.5	65.3	62.2	60.1	55.8	54.8	54.5	52.6	52.9	56.0	52.8	51.2
	27–30	—	—	—	—	—	—	—	—	54.3	58.6	55.3	54.4	50.4	52.9	48.3	53.7	51.7	48.1
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	45.6	43.5	39.1	40.9
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

(Table continued on next page.)

TABLE 7-4 (cont.)
Trends in Availability of Drugs as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, 45, 50, and 55

Q. How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?

Percentage saying fairly easy or very easy to get [a]

	Age Group	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Cocaine	18	51.3	47.6	47.8	46.2	44.6	43.3	47.8	44.7	46.5	47.1	42.4	39.4	35.5	30.5	29.8	30.5	29.2	29.1	-0.1
	19–22	47.7	52.6	52.1	49.6	47.6	46.7	47.0	50.0	47.4	47.3	44.0	38.5	37.2	39.2	32.9	28.1	34.4	33.3	-1.1
	23–26	51.8	45.7	45.0	44.6	47.8	40.8	50.7	48.4	51.2	47.4	45.5	44.0	41.1	37.8	37.4	36.8	36.8	36.2	-0.6
	27–30	46.9	50.0	44.6	45.5	46.3	42.9	38.0	43.1	43.2	45.8	50.6	43.6	40.8	44.2	42.3	35.0	41.6	39.4	-2.2
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Crack	18	43.8	41.1	42.6	40.2	38.5	35.3	39.2	39.3	38.8	37.5	35.2	31.9	26.1	24.0	22.0	24.6	20.1	22.0	+1.9
	19–22	40.0	40.8	40.2	37.3	35.7	37.5	33.7	34.0	35.2	35.7	31.4	27.3	27.2	27.3	20.6	20.8	23.3	21.0	-2.2
	23–26	38.4	35.0	31.9	37.1	33.9	32.8	36.5	35.1	34.0	31.4	33.1	27.4	27.1	25.3	27.6	24.2	26.7	21.9	-4.8
	27–30	33.3	38.8	35.9	36.9	33.4	33.7	28.0	34.4	29.6	36.4	36.1	33.1	27.5	28.9	25.2	24.6	26.5	26.5	-0.1
	35	45.0	41.6	45.0	41.2	38.9	40.5	36.1	34.2	37.1	35.1	33.2	31.6	30.0	30.4	27.3	28.7	25.7	26.1	+0.4
	40	43.3	44.3	42.0	38.7	39.5	39.0	35.8	38.6	37.1	32.7	35.2	33.2	30.9	30.1	27.9	25.5	28.1	24.7	-3.4
	45	—	—	—	—	—	37.0	40.0	40.6	36.2	37.0	34.2	31.7	36.2	32.3	28.2	32.3	27.3	24.7	-2.6
	50	—	—	—	—	—	—	—	—	—	—	32.8	36.3	32.4	29.5	30.5	30.0	27.2	29.9	+2.6
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30.2	34.6	28.7	-5.9
Cocaine powder	18	45.7	43.7	44.6	40.7	40.2	37.4	41.7	41.6	42.5	41.2	38.9	33.9	29.0	26.4	25.1	28.4	22.3	25.8	+3.5 s
	19–22	47.1	45.2	45.2	43.3	43.9	45.5	43.2	44.3	44.2	44.5	39.0	36.1	35.6	35.4	26.0	25.1	31.8	33.0	+1.2
	23–26	44.4	44.3	41.8	44.4	40.7	43.4	48.5	45.1	46.4	45.0	41.4	41.6	40.3	37.5	37.0	35.1	34.0	34.3	+0.3
	27–30	43.9	46.5	43.9	42.7	42.4	39.7	37.9	40.2	42.7	43.0	47.5	41.3	38.2	38.4	37.0	35.4	36.9	40.7	+3.8
	35	47.0	43.4	47.9	43.1	41.7	42.0	39.6	35.8	39.5	37.4	38.6	34.9	35.5	35.3	31.4	35.2	31.9	34.2	+2.3
	40	46.0	46.7	44.7	41.5	41.5	40.7	38.5	40.3	37.8	35.2	36.5	33.9	33.5	31.8	29.5	29.8	31.6	28.6	-3.0
	45	—	—	—	—	—	39.0	40.2	40.6	37.3	38.2	34.1	31.5	37.2	33.2	28.7	34.0	29.9	26.6	-3.3
	50	—	—	—	—	—	—	—	—	—	—	32.6	35.9	32.8	31.0	30.8	30.3	27.8	30.7	+2.9
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30.6	35.3	30.4	-4.9 s
Heroin	18	35.6	32.1	33.5	32.3	29.0	27.9	29.6	27.3	27.4	29.7	25.4	27.4	24.1	20.8	19.9	22.1	20.2	20.4	+0.1
	19–22	32.1	32.7	29.4	30.2	26.4	26.9	22.6	25.4	25.3	26.5	24.2	19.4	22.0	21.2	19.3	16.0	20.2	21.1	+0.9
	23–26	35.1	31.9	25.7	26.6	27.2	25.5	30.9	22.5	28.1	22.2	23.4	23.4	23.1	21.1	22.7	23.1	21.1	21.2	+0.1
	27–30	28.3	33.0	29.3	29.9	27.0	27.5	22.0	27.8	25.4	27.5	26.3	25.2	25.2	28.0	23.3	20.9	25.5	26.9	+1.4
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Some other narcotic [c]	18	42.8	40.8	43.9	40.5	44.0	39.3	40.2	39.2	39.6	37.3	34.9	36.1	54.2	50.7	50.4	46.5	42.2	39.0	-3.3
	19–22	38.9	39.5	41.1	44.1	40.4	40.6	39.4	41.4	38.5	38.3	38.0	35.3	55.2	53.8	52.2	53.5	49.7	47.5	-2.3
	23–26	39.9	38.2	38.1	35.8	40.0	40.3	47.7	44.7	45.5	41.7	41.2	42.5	56.2	59.6	58.6	62.1	52.1	52.6	+0.4
	27–30	32.2	36.9	32.4	39.4	38.5	38.9	35.8	37.7	39.8	41.3	39.4	43.5	62.3	65.2	59.8	64.4	56.2	60.9	+4.8
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Amphetamines [d]	18	60.8	58.1	57.1	57.1	57.4	55.0	55.4	51.2	52.9	49.6	47.9	47.1	44.1	47.0	45.4	42.7	44.5	41.9	-2.6
	19–22	56.3	57.6	60.2	56.5	53.7	55.1	53.9	56.9	52.3	55.8	49.5	49.8	43.6	52.3	54.4	54.0	55.3	57.4	+2.0
	23–26	53.2	49.1	51.1	49.4	48.2	50.3	51.8	51.9	58.0	53.7	46.9	51.0	45.5	55.5	55.6	59.4	54.3	54.7	+0.3
	27–30	41.4	48.2	47.6	49.3	45.6	48.7	43.9	45.3	49.2	48.1	45.0	51.1	46.4	49.9	54.6	54.2	55.5	56.6	+1.1
	35	39.4	38.5	42.2	39.6	39.2	39.2	35.4	35.4	40.3	40.4	40.6	39.2	37.1	40.4	37.5	40.7	38.9	37.3	-1.6
	40	41.0	41.9	39.4	37.5	39.4	38.7	37.9	41.1	38.4	37.6	39.2	37.2	37.0	34.3	35.8	34.6	35.6	34.0	-1.6
	45	—	—	—	—	—	35.8	39.8	39.3	37.1	38.3	36.8	33.0	39.8	37.0	34.5	39.3	35.2	32.4	-2.7
	50	—	—	—	—	—	—	—	—	—	—	32.8	38.0	34.4	33.9	32.3	33.0	31.1	33.5	+2.4
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	36.8	39.6	35.3	-4.3

(List of drugs continued.)

TABLE 7-4 (cont.)
Trends in Availability of Drugs as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, 45, 50, and 55

Q. How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?	Age Group	Percentage saying "fairly easy" or "very easy" to get [a]																	
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Crystal methamphetamine (ice)	18	—	—	—	—	—	—	—	—	—	—	24.0	24.3	26.0	26.6	25.6	27.0	26.9	27.6
	19–22	—	—	—	—	—	—	—	—	—	—	24.0	21.8	22.5	20.9	24.7	25.5	25.4	29.3
	23–26	—	—	—	—	—	—	—	—	—	—	22.3	20.0	21.3	22.9	24.5	24.7	24.7	25.8
	27–30	—	—	—	—	—	—	—	—	—	—	27.3	19.7	22.0	21.2	21.7	25.8	26.1	25.1
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sedatives/ barbiturates [d]	18	49.1	54.9	55.2	52.5	51.9	51.3	48.3	48.2	47.8	48.4	45.9	42.4	44.0	44.5	43.3	42.3	41.4	40.0
	19–22	59.5	61.1	56.8	54.2	48.1	52.7	46.8	44.6	45.5	47.7	44.2	41.7	43.4	41.9	40.6	42.9	41.1	39.8
	23–26	—	—	—	—	52.7	47.7	46.4	45.9	47.4	44.8	41.6	39.6	42.0	38.8	40.3	42.1	40.6	39.1
	27–30	—	—	—	—	—	—	—	—	43.2	44.5	44.2	38.5	37.8	39.7	37.4	39.9	41.2	39.1
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tranquilizers	18	59.1	60.8	58.9	55.3	54.5	54.7	51.2	48.6	49.1	45.3	44.7	40.8	40.9	41.1	39.2	37.8	36.0	35.4
	19–22	67.4	62.8	62.0	62.3	52.5	55.6	52.9	50.3	50.0	49.4	45.4	44.8	40.7	40.9	41.0	40.2	37.6	37.8
	23–26	—	—	—	—	60.2	54.3	54.1	56.3	52.8	51.4	47.8	45.1	48.1	43.2	45.9	44.3	42.3	36.4
	27–30	—	—	—	—	—	—	—	—	55.3	54.4	54.9	47.5	47.8	47.4	44.4	44.8	46.2	41.9
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Steroids	18	—	—	—	—	—	—	—	—	—	—	—	46.7	46.8	44.8	42.9	45.5	40.3	41.7
	19–22	—	—	—	—	—	—	—	—	—	—	44.1	44.8	46.3	41.7	40.9	41.8	40.8	39.2
	23–26	—	—	—	—	—	—	—	—	—	—	37.6	35.8	39.3	35.8	37.0	37.4	33.9	35.5
	27–30	—	—	—	—	—	—	—	—	—	—	36.4	30.6	35.0	31.6	30.5	33.1	35.6	32.5
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Approximate Weighted N =	18	*3,240*	*3,578*	*3,602*	*3,385*	*3,269*	*3,274*	*3,077*	*3,271*	*3,231*	*2,806*	*2,549*	*2,476*	*2,586*	*2,670*	*2,526*	*2,552*	*2,340*	*2,517*
	19–22	*582*	*601*	*582*	*588*	*559*	*571*	*592*	*581*	*568*	*572*	*571*	*534*	*512*	*480*	*459*	*470*	*467*	*463*
	23–26					*540*	*541*	*548*	*539*	*526*	*514*	*532*	*511*	*523*	*500*	*463*	*449*	*418*	*419*
	27–30									*519*	*513*	*510*	*487*	*475*	*473*	*437*	*446*	*468*	*459*
	35															*1,142*	*1,141*	*1,146*	*1,150*
	40																		
	45																		
	50																		
	55																		

(Years Cont.)

(Table continued on next page.)

TABLE 7-4 (cont.)
Trends in Availability of Drugs as Perceived by Respondents in Modal Age Groups of 18, 19–22, 23–26, 27–30, 35, 40, 45, 50, and 55

Q. How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?	Age Group	Percentage saying "fairly easy" or "very easy" to get [a]																		2014–2015 change
		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	
Crystal methamphetamine (ice)	18	29.8	27.6	27.8	28.3	28.3	26.1	26.7	27.2	26.7	25.1	23.3	22.3	18.3	17.1	14.5	17.2	13.7	15.3	+1.7
	19–22	31.0	31.8	27.4	28.4	31.2	26.5	27.1	28.9	29.1	27.7	24.1	19.2	19.3	19.4	13.5	15.3	15.3	15.0	-0.3
	23–26	30.2	28.5	25.8	26.4	25.1	26.4	32.3	27.8	32.3	27.8	27.7	23.1	26.1	18.2	23.5	16.3	16.0	15.1	-0.9
	27–30	22.6	29.1	25.3	27.6	29.5	30.9	25.5	27.4	31.8	29.7	31.4	27.7	27.6	26.2	24.2	22.3	22.0	20.3	-1.7
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sedatives/ barbiturates [e]	18	40.7	37.9	37.4	35.7	36.6	35.3	46.3	44.4	43.8	41.7	38.8	37.9	36.8	32.4	28.7	27.9	26.3	25.0	-1.3
	19–22	39.2	42.3	40.6	39.3	40.8	38.4	43.8	47.8	42.6	47.5	43.2	42.6	39.6	38.1	31.6	32.1	32.6	35.3	+2.7
	23–26	42.6	39.7	37.6	36.1	36.4	37.8	49.4	48.4	51.4	46.5	43.3	47.7	40.4	41.3	40.1	42.2	33.2	35.1	+2.0
	27–30	33.9	38.4	36.1	38.1	34.8	35.6	40.5	42.9	43.3	46.4	44.7	48.5	43.1	42.9	42.3	44.8	39.9	42.9	+3.0
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tranquilizers	18	36.2	32.7	33.8	33.1	32.9	29.8	30.1	25.7	24.4	23.6	22.4	21.2	18.4	16.8	14.9	15.0	14.4	14.9	+0.6
	19–22	36.8	37.1	36.5	34.9	34.6	34.2	29.7	30.1	22.8	28.5	23.3	18.3	20.2	18.6	17.3	17.4	16.8	19.7	+2.9
	23–26	39.4	38.3	37.6	38.7	33.7	32.5	36.6	32.9	33.0	31.7	30.3	27.7	21.8	23.0	22.1	18.5	17.5	16.6	-0.8
	27–30	39.9	41.5	36.7	42.9	38.1	35.9	30.6	33.5	32.1	32.4	33.1	30.1	30.6	27.1	25.7	28.1	21.2	22.1	+0.9
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Steroids	18	44.5	44.6	44.8	44.4	45.5	40.7	42.6	39.7	41.1	40.1	35.2	30.3	27.3	26.1	25.0	28.5	22.0	23.7	+1.7
	19–22	39.2	40.5	40.3	38.1	41.4	39.4	37.8	37.6	37.1	37.9	33.5	28.7	25.1	24.3	21.2	20.6	25.7	25.1	-0.6
	23–26	34.9	37.1	34.0	34.7	33.1	31.1	34.7	31.2	34.2	33.3	30.2	28.6	22.2	29.2	25.6	23.6	24.1	18.3	-5.8
	27–30	30.5	34.5	36.2	34.6	33.0	32.6	30.6	32.4	29.7	30.9	31.0	31.9	27.6	27.0	23.9	22.3	22.6	23.9	+1.3
	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Approximate Weighted N =	18	*2,520*	*2,215*	*2,095*	*1,850*	*2,138*	*2,391*	*2,169*	*2,161*	*2,161*	*2,420*	*2,276*	*2,243*	*2,395*	*2,337*	*2,280*	*2,092*	*2,066*	*2,181*	
	19–22	*433*	*425*	*400*	*398*	*375*	*386*	*441*	*392*	*376*	*362*	*380*	*377*	*377*	*355*	*341*	*342*	*313*	*294*	
	23–26	*395*	*415*	*388*	*401*	*362*	*356*	*411*	*359*	*335*	*338*	*355*	*312*	*358*	*313*	*332*	*325*	*309*	*305*	
	27–30	*425*	*424*	*365*	*357*	*349*	*368*	*393*	*359*	*347*	*324*	*334*	*305*	*340*	*325*	*334*	*281*	*310*	*258*	
	35	*1,032*	*1,022*	*981*	*977*	*890*	*934*	*963*	*1,009*	*925*	*863*	*898*	*952*	*895*	*852*	*875*	*844*	*769*	*726*	
	40	*1,029*	*1,093*	*1,096*	*1,065*	*1,037*	*898*	*967*	*928*	*919*	*868*	*881*	*870*	*911*	*850*	*823*	*820*	*883*	*787*	
	45						*911*	*1,026*	*1,005*	*972*	*954*	*851*	*888*	*846*	*852*	*842*	*806*	*785*	*839*	
	50											*902*	*975*	*989*	*939*	*958*	*819*	*868*	*802*	
	55																*832*	*903*	*907*	

Source. The Monitoring the Future study, the University of Michigan.

Notes. Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001.

Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

' — ' indicates data not available.

[a]Answer alternatives were: (1) Probably impossible, (2) Very difficult, (3) Fairly difficult, (4) Fairly easy, and (5) Very easy.

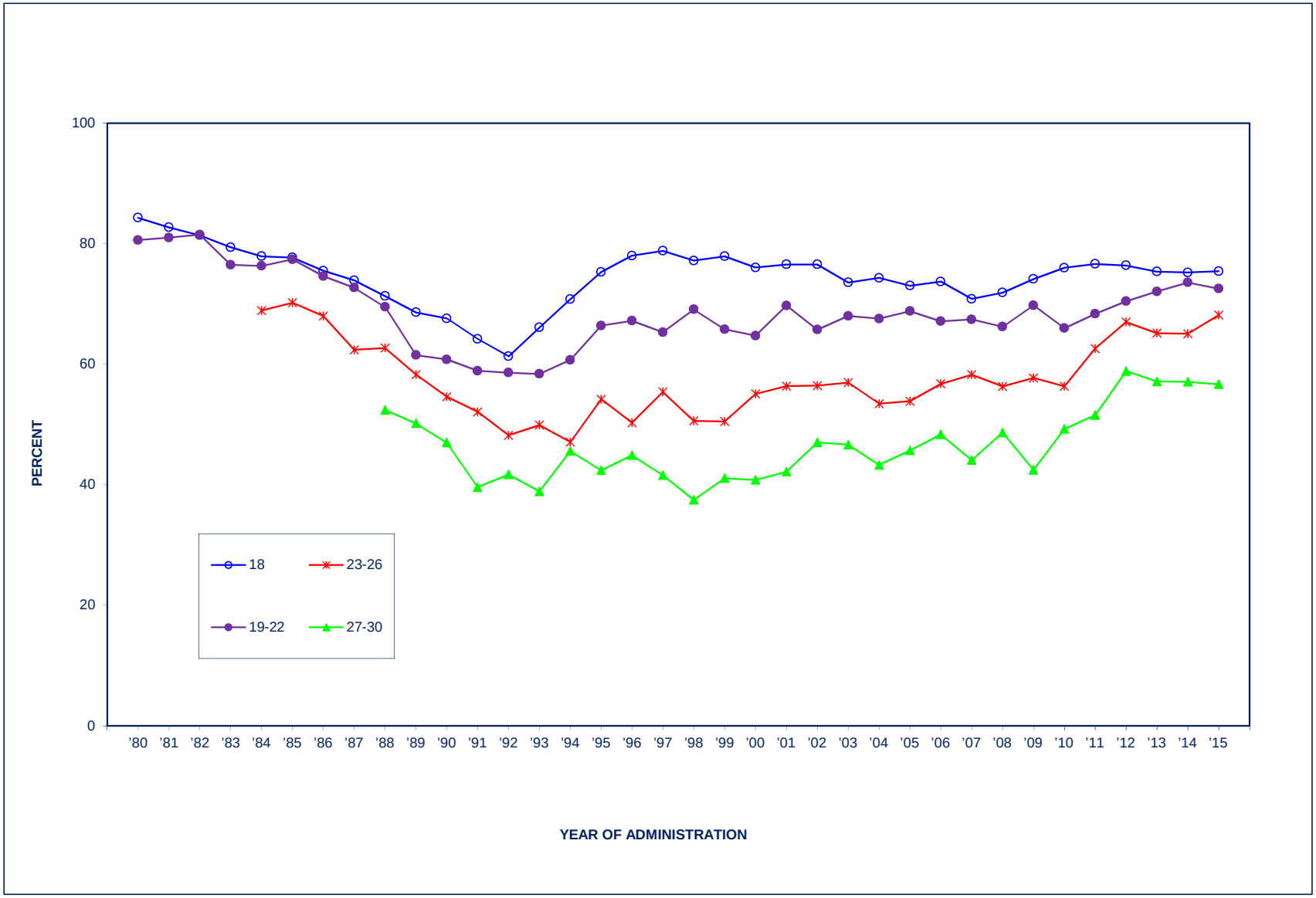
[b]In 2001 the question text was changed from other psychedelics to other hallucinogens, and shrooms was added to the list of examples. These changes likely explain the discontinuity in the 2001 results.

[c]In 2010 the list of examples for narcotics other than heroin was changed from methadone, opium to Vicodin,OxyContin, Percocet, etc. This change likely explains the discontinuity in the 2010 results.

[d]In 2011 pep pills and bennies were replaced in the list of examples by Adderall and Ritalin. This change likely explains the discontinuity in the 2011 results.

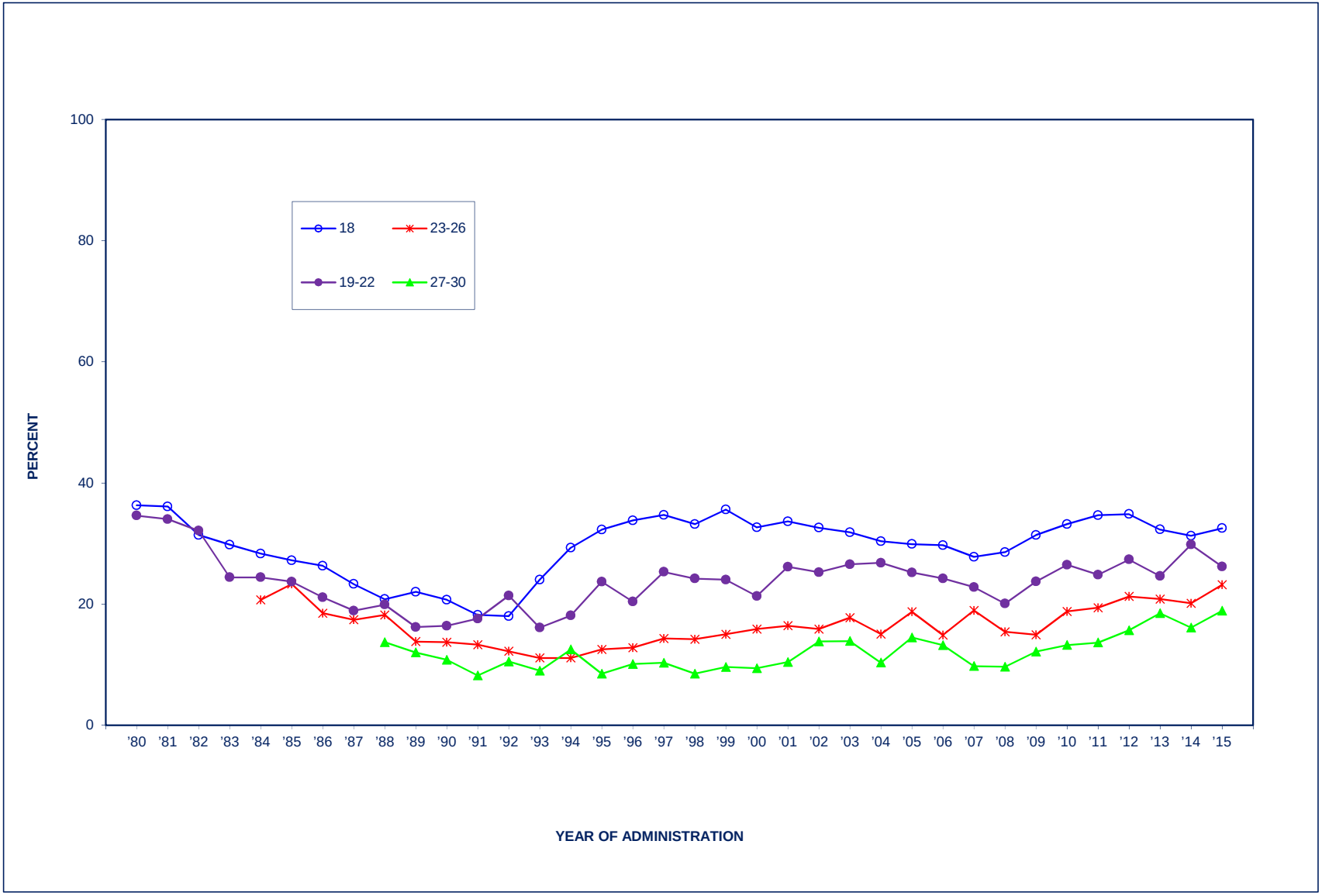
[e]In 2004 the question text was changed from barbiturates to sedatives/barbiturates and the list of examples was changed from downers, goofballs, reds, yellows, etc. to just downers. These changes likely explain the discontinuity in the 2004 results.

FIGURE 7-1
Trends in Exposure to Use of ANY ILLICIT DRUGS
among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30



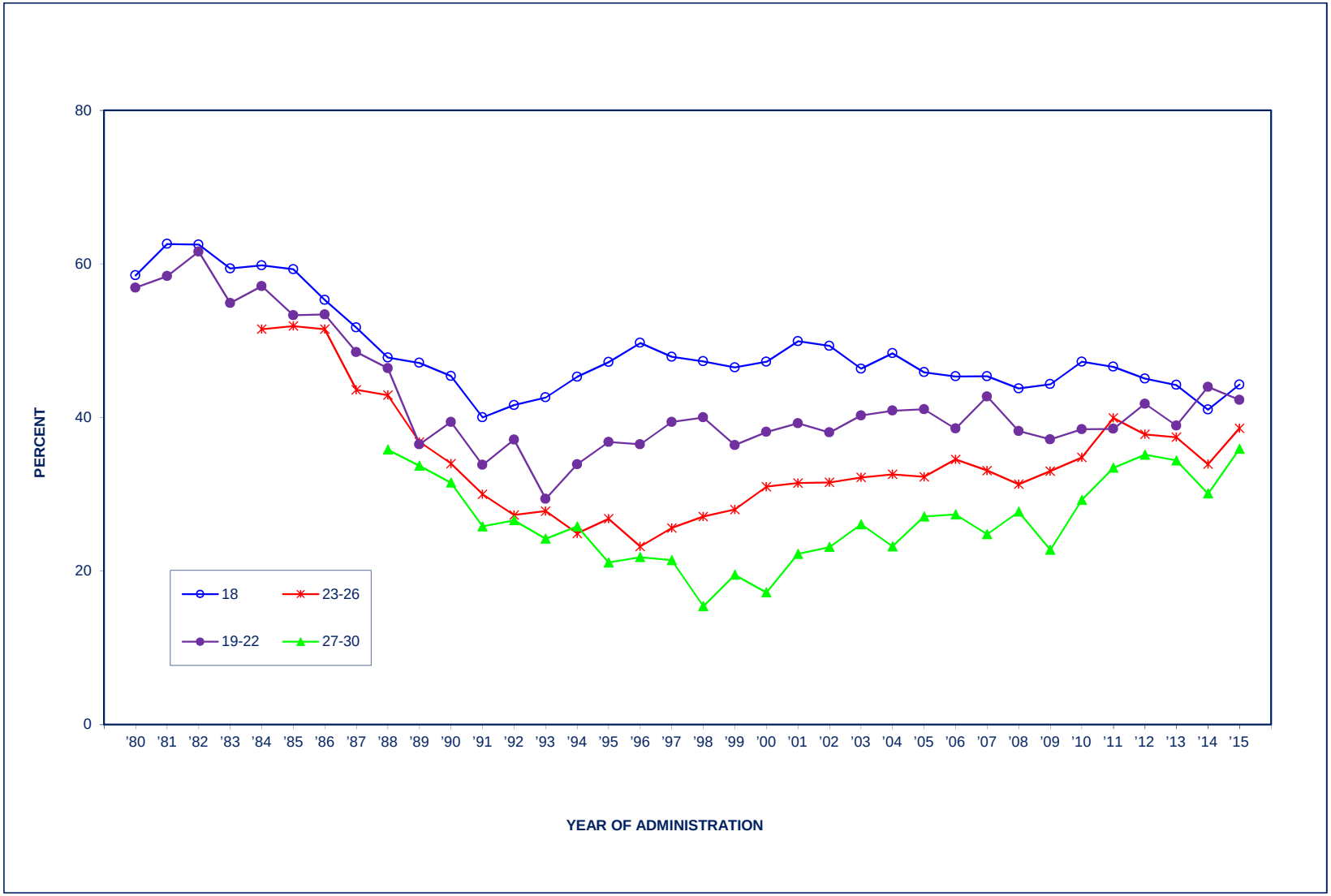
Source. The Monitoring the Future study, the University of Michigan.

FIGURE 7-2
Trends in Exposure to Use of ANY ILLICIT DRUGS
among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30



Source. The Monitoring the Future study, the University of Michigan.

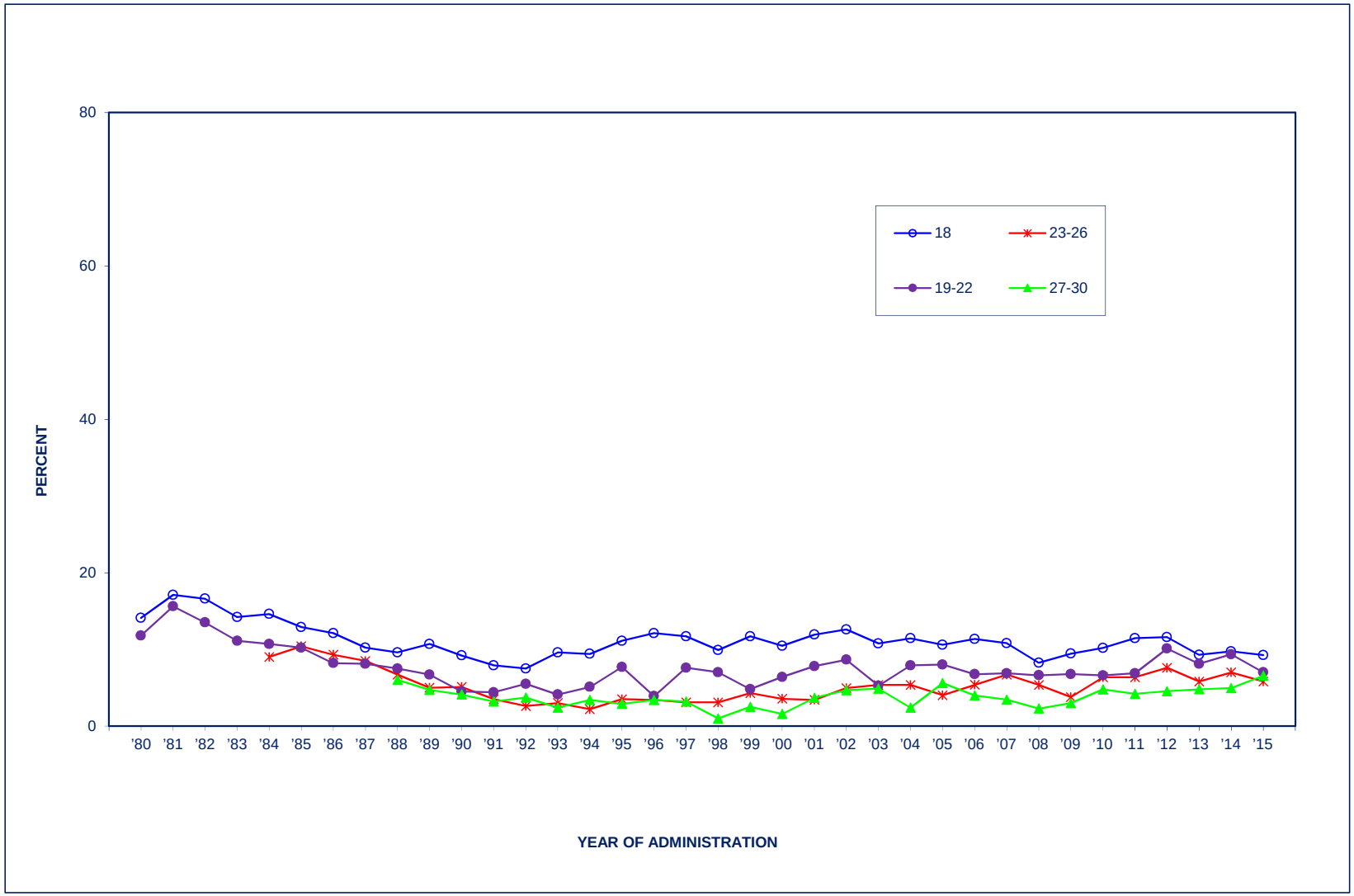
FIGURE 7-3
Trends in Exposure to Use of ANY ILLICIT DRUG OTHER THAN MARIJUANA[a] among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30



Source. The Monitoring the Future study, the University of Michigan.

[a]These estimates were derived from responses to the question for the following drugs: marijuana, LSD, other hallucinogens, cocaine, heroin or other narcotics, amphetamines, sedatives (barbiturates), and tranquilizers.

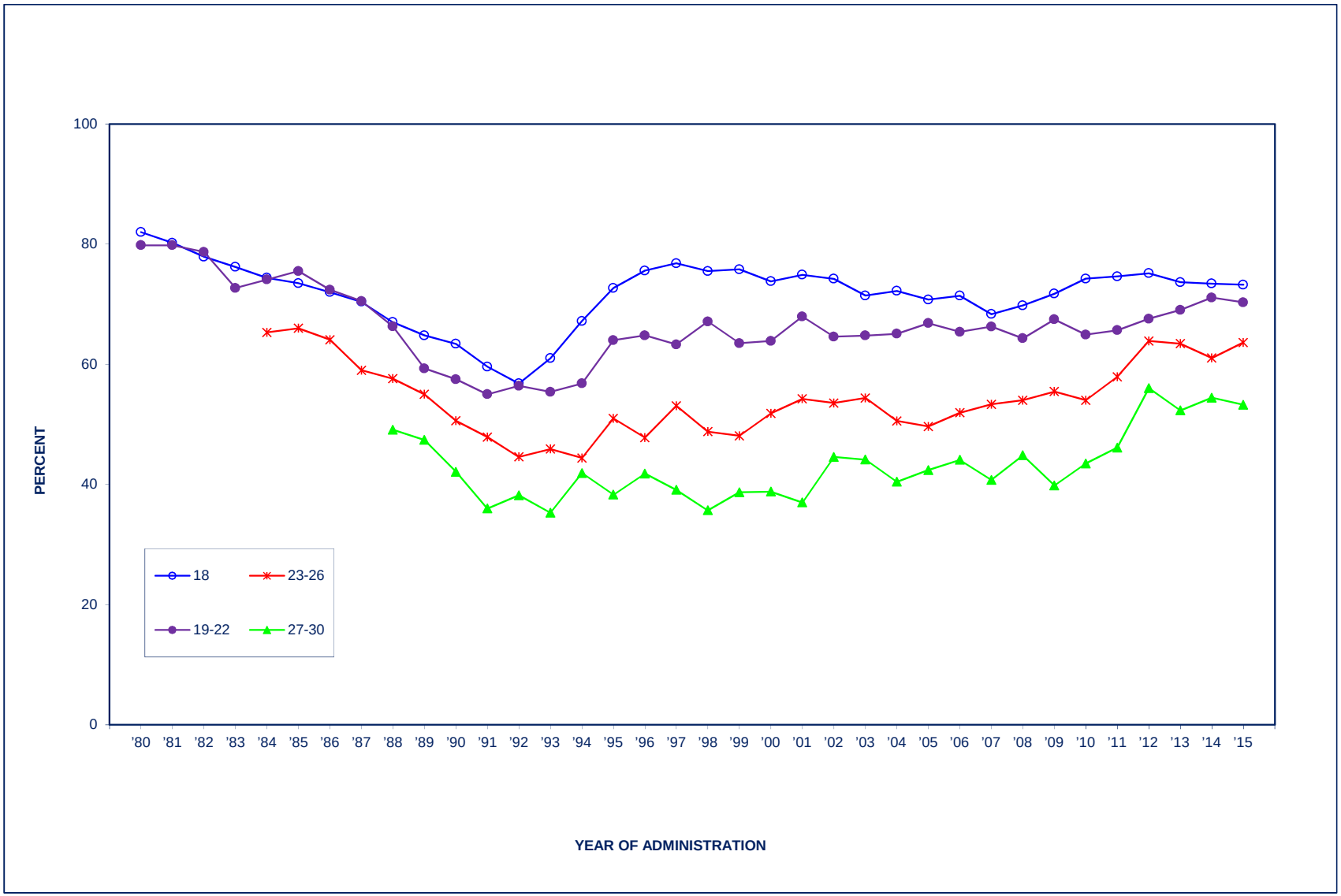
FIGURE 7-4
Trends in Exposure to Use of ANY ILLICIT DRUG OTHER THAN MARIJUANA[a] among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30



Source. The Monitoring the Future study, the University of Michigan.

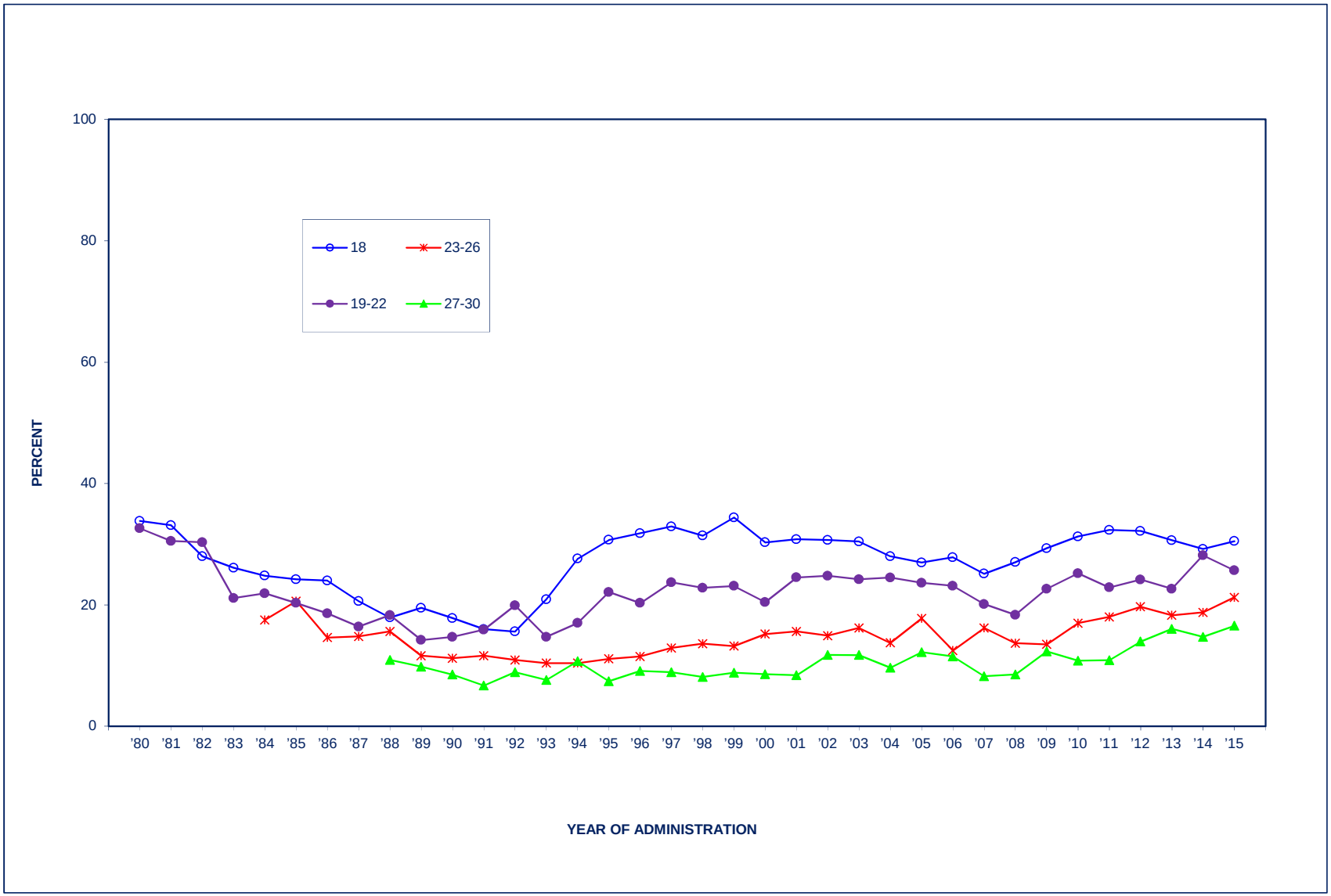
[a]These estimates were derived from responses to the question for the following drugs: marijuana, LSD, other hallucinogens, cocaine, heroin or other narcotics, amphetamines, sedatives (barbiturates), and tranquilizers.

FIGURE 7-5
Trends in Exposure to Use of MARIJUANA
among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30



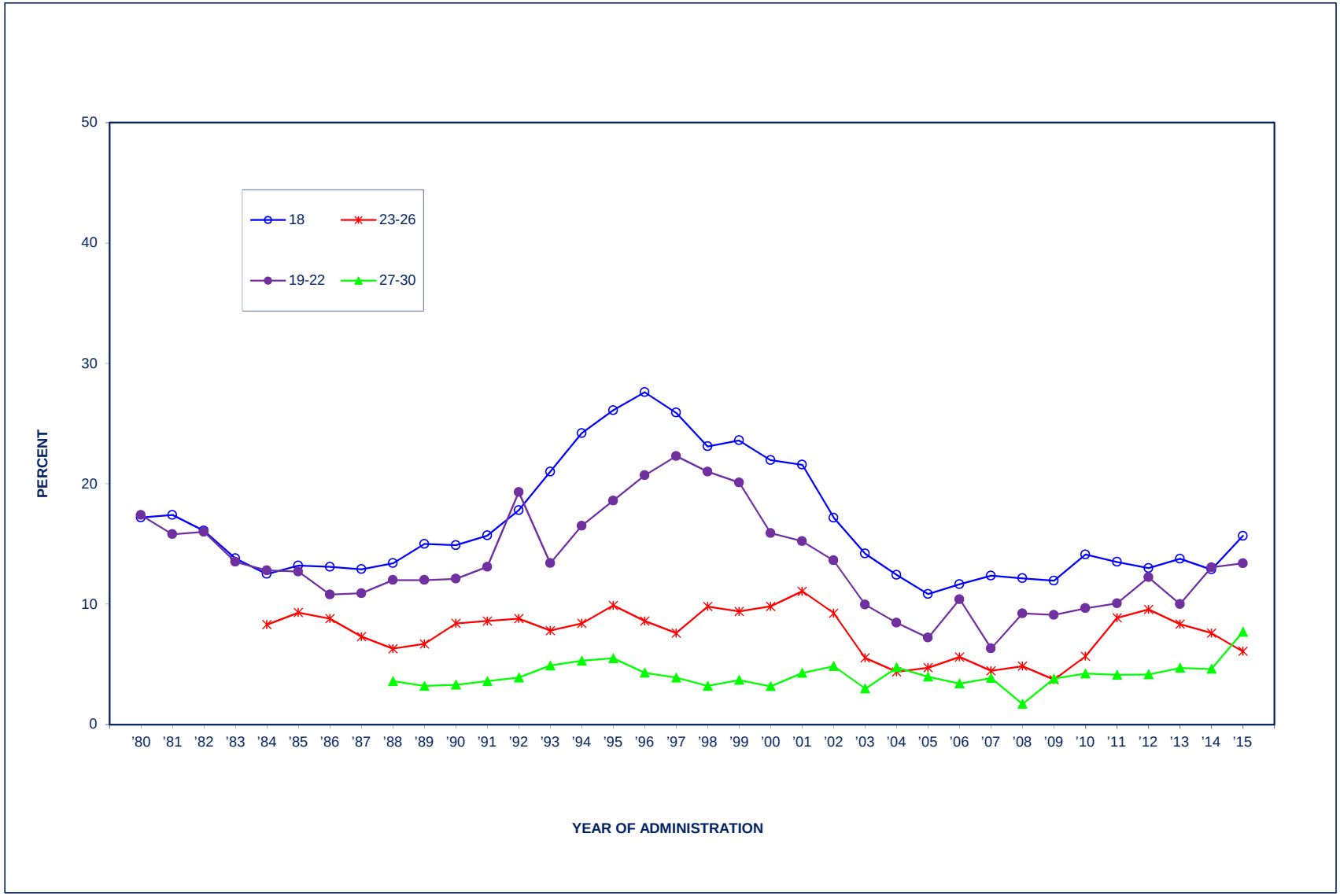
Source. The Monitoring the Future study, the University of Michigan.

FIGURE 7-6
Trends in Exposure to Use of MARIJUANA
among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30



Source. The Monitoring the Future study, the University of Michigan.

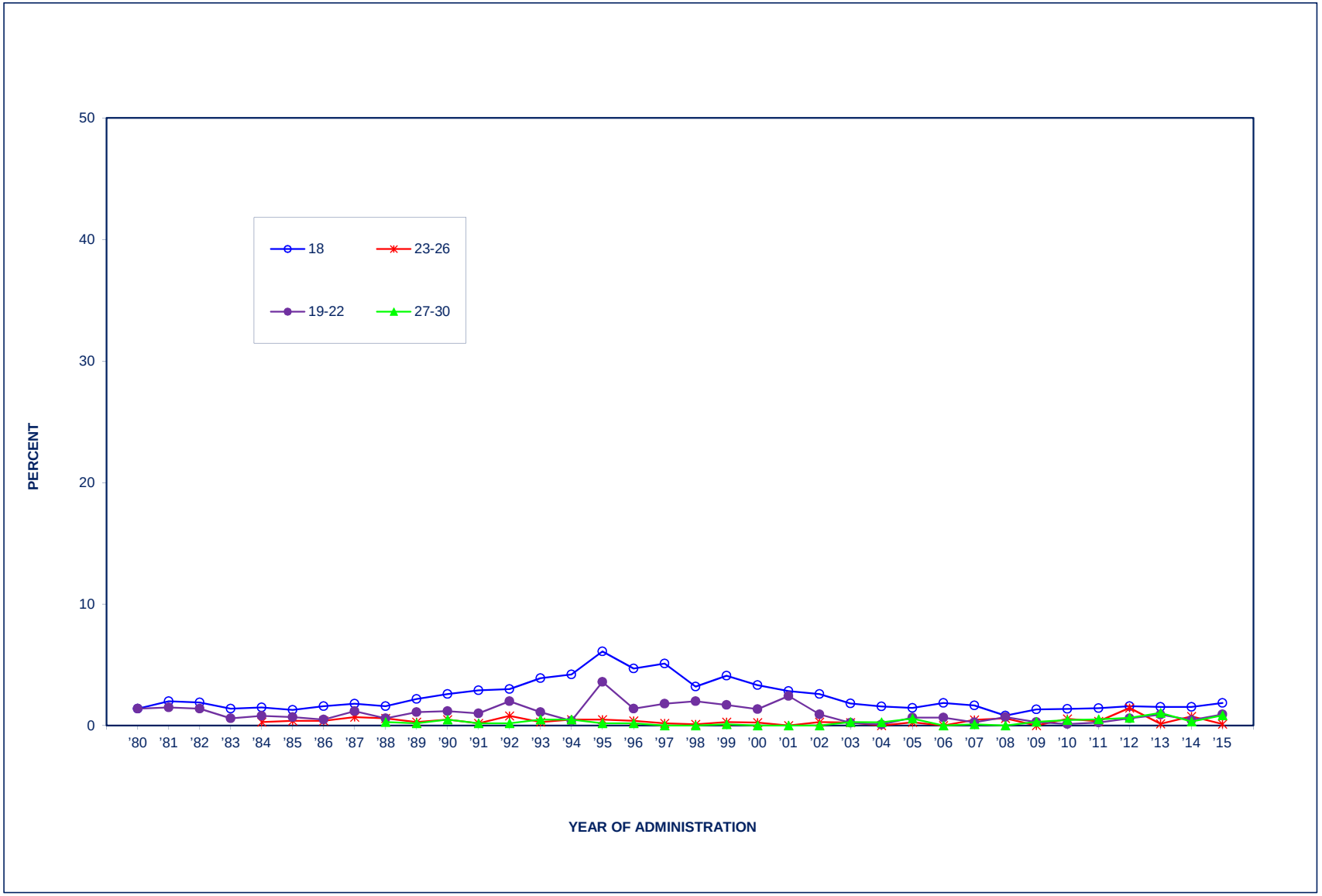
FIGURE 7-7
Trends in Exposure to Use of LSD
among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30



Source. The Monitoring the Future study, the University of Michigan.

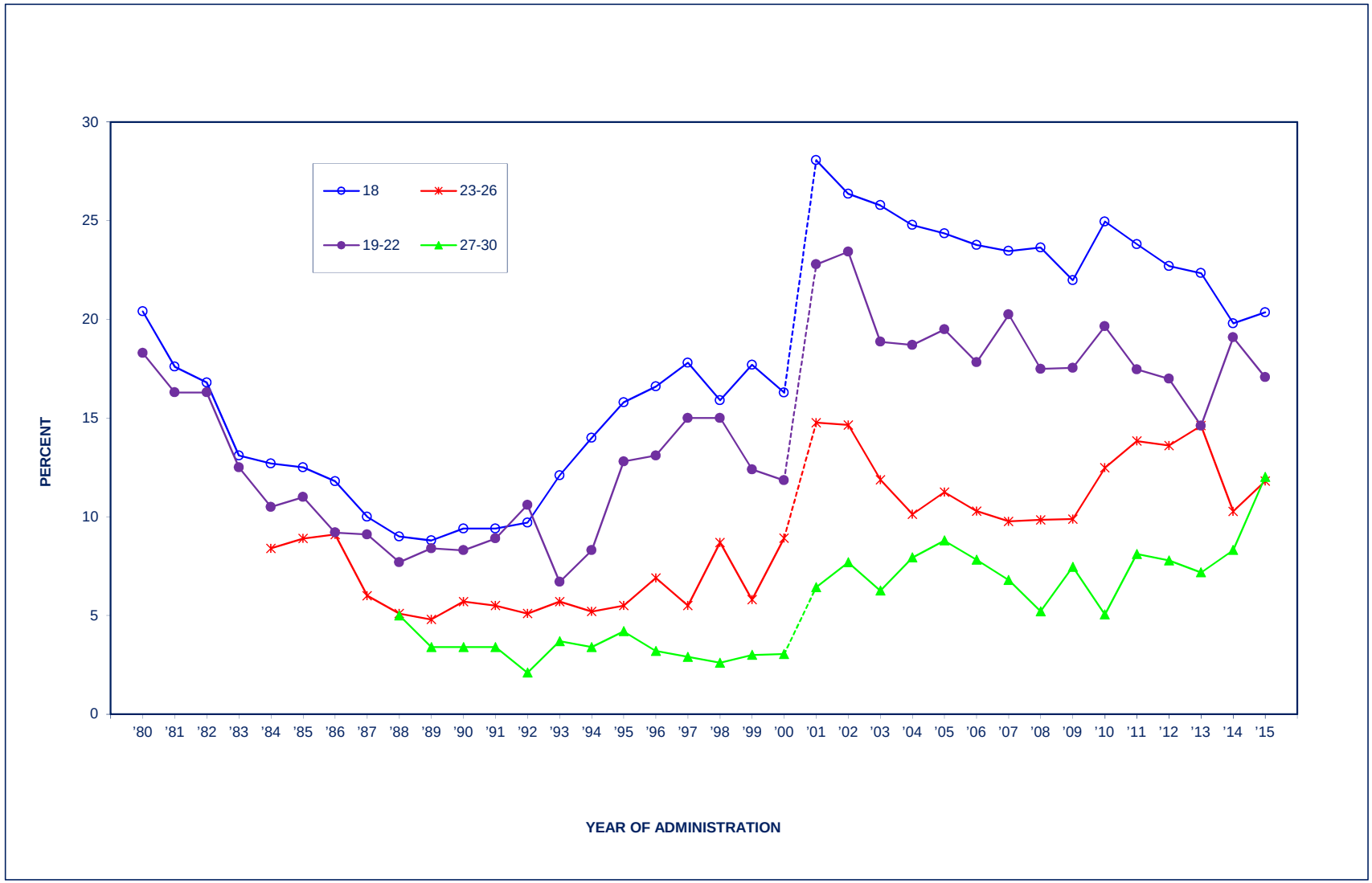
FIGURE 7-8
Trends in Exposure to Use of LSD
among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

% Saying Often Exposed



Source. The Monitoring the Future study, the University of Michigan.

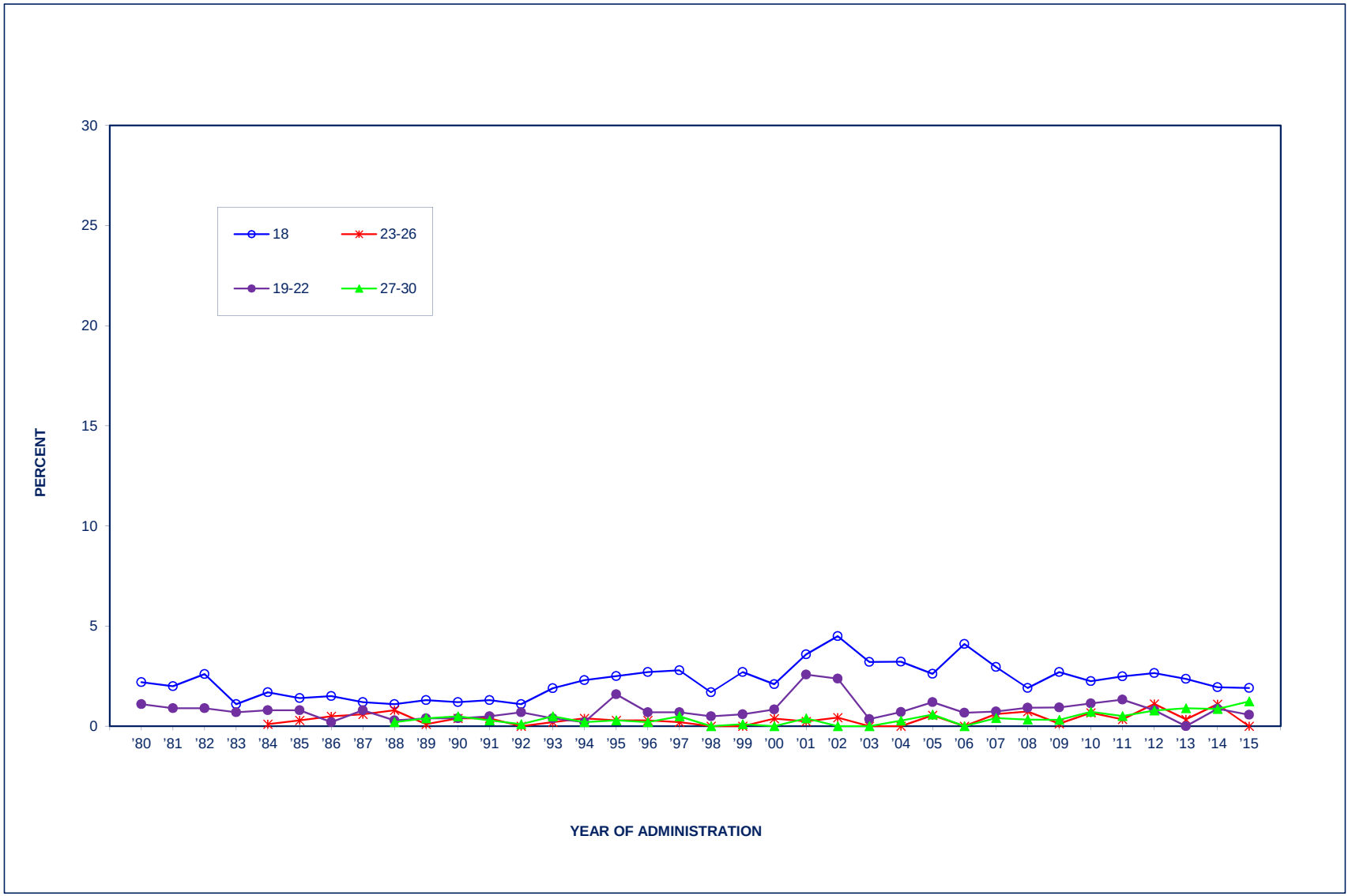
FIGURE 7-9
Trends in Exposure to Use of HALLUCINOGENS OTHER THAN LSD[a] among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30



Source. The Monitoring the Future study, the University of Michigan.

[a]In 2001 the question text was changed from other psychedelics to other hallucinogens, and shrooms was added to the list of examples. These changes likely explain the discontinuity in the 2001 results.

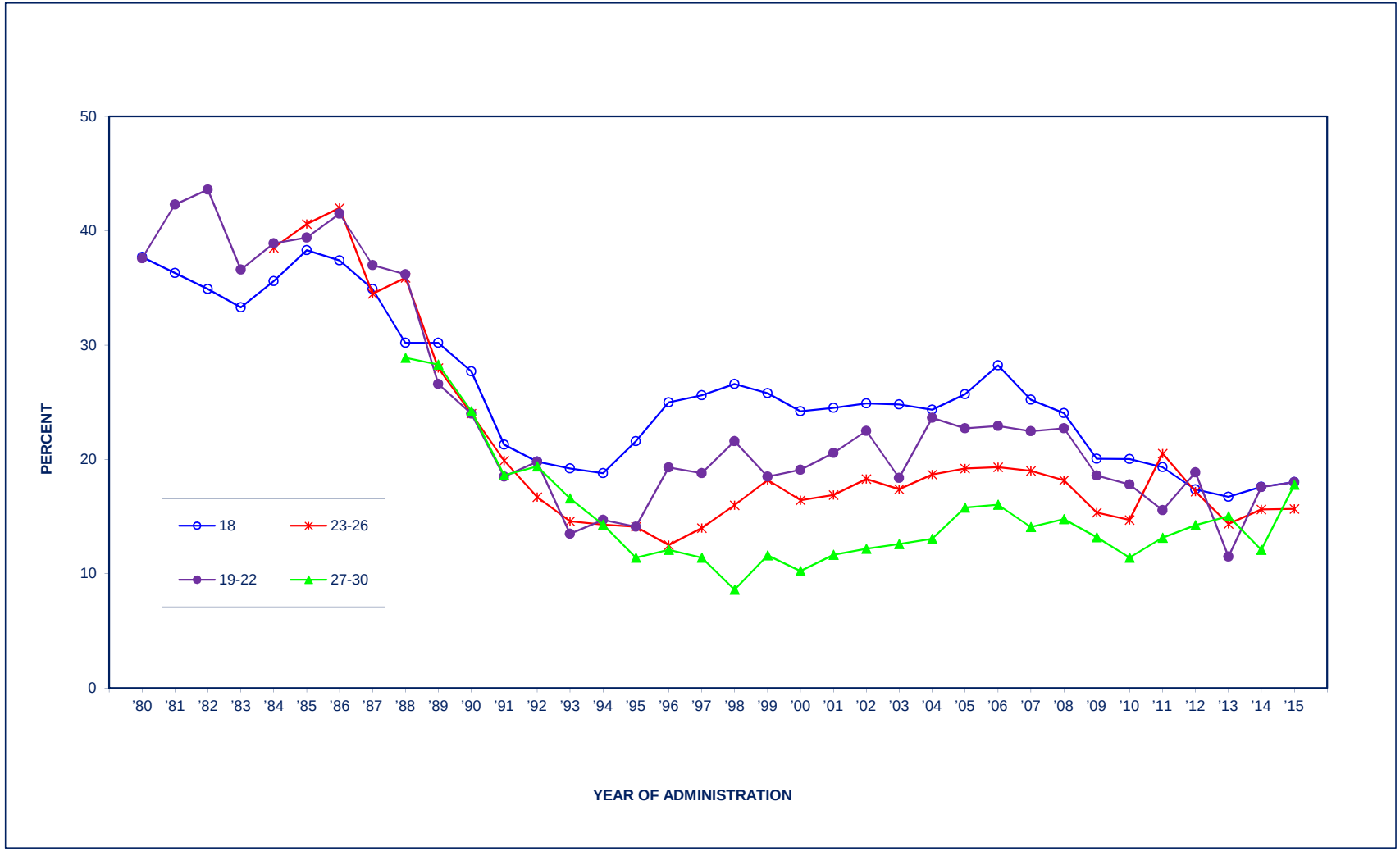
FIGURE 7-10
Trends in Exposure to Use of HALLUCINOGENS OTHER THAN LSD[a] among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30



Source. The Monitoring the Future study, the University of Michigan.

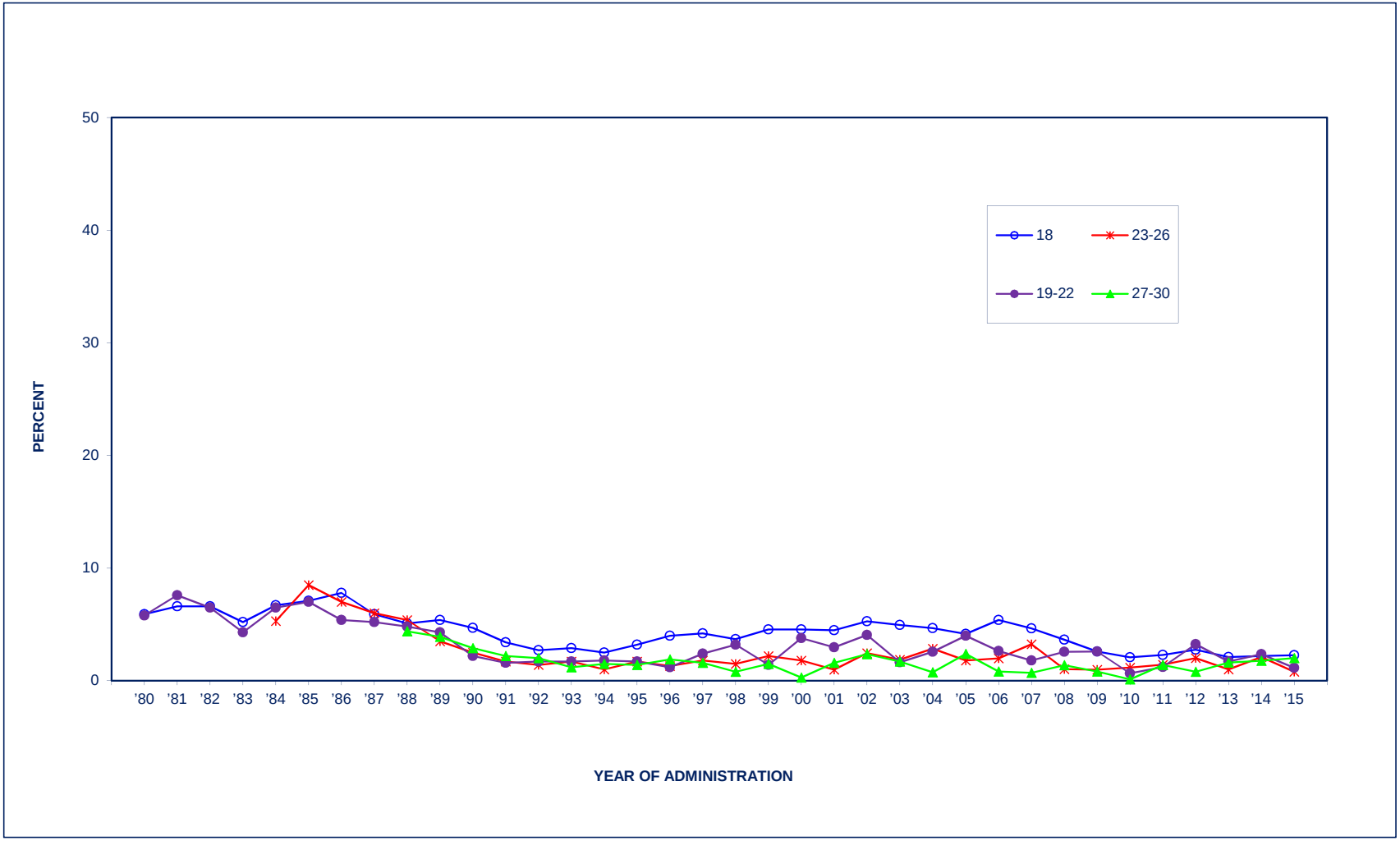
[a]In 2001 the question text was changed from other psychedelics to other hallucinogens, and shrooms was added to the list of examples. These changes likely explain the discontinuity in the 2001 results.

FIGURE 7-11
Trends in Exposure to Use of COCAINE
among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30



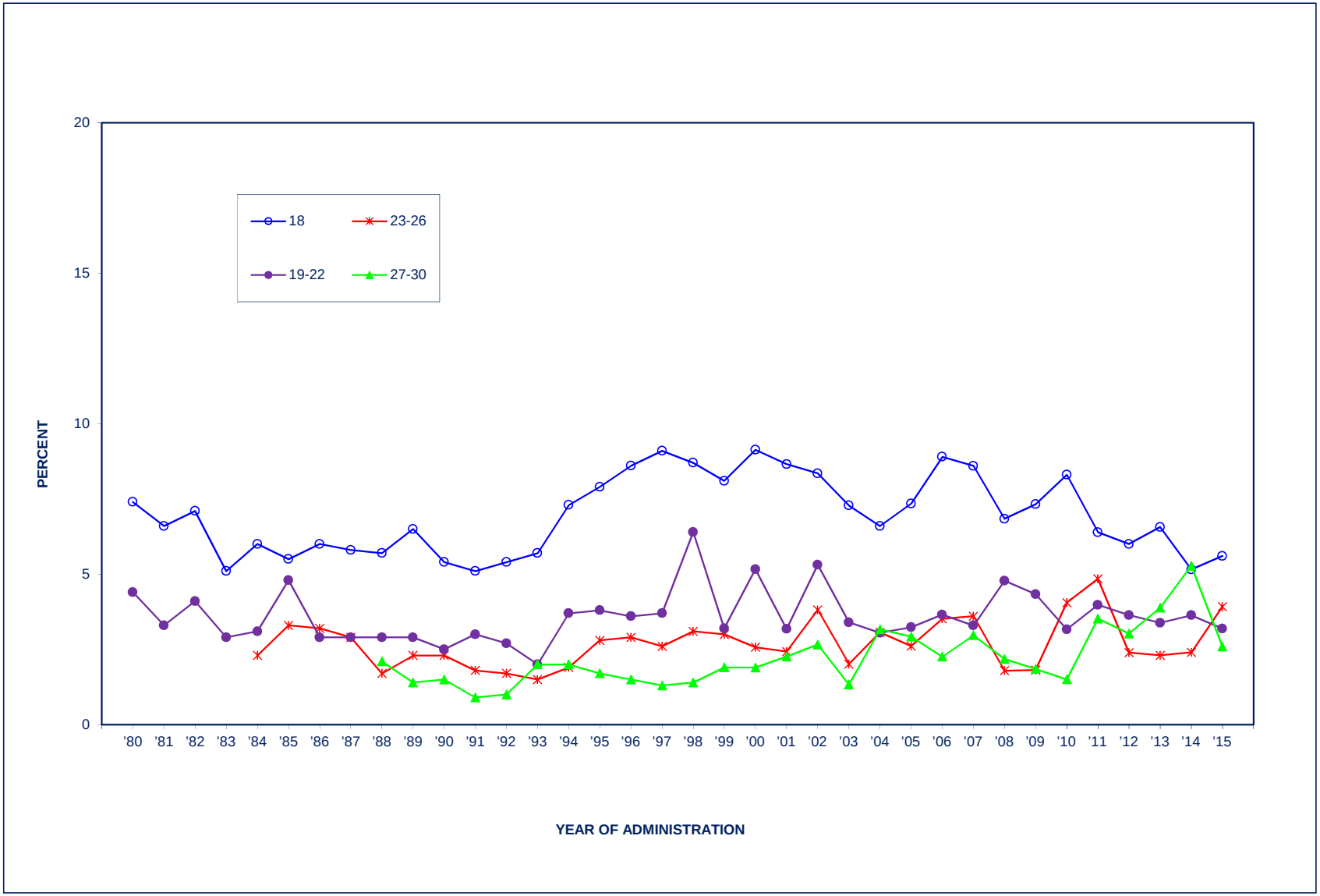
Source. The Monitoring the Future study, the University of Michigan.

FIGURE 7-12
Trends in Exposure to Use of COCAINE
among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30



Source. The Monitoring the Future study, the University of Michigan.

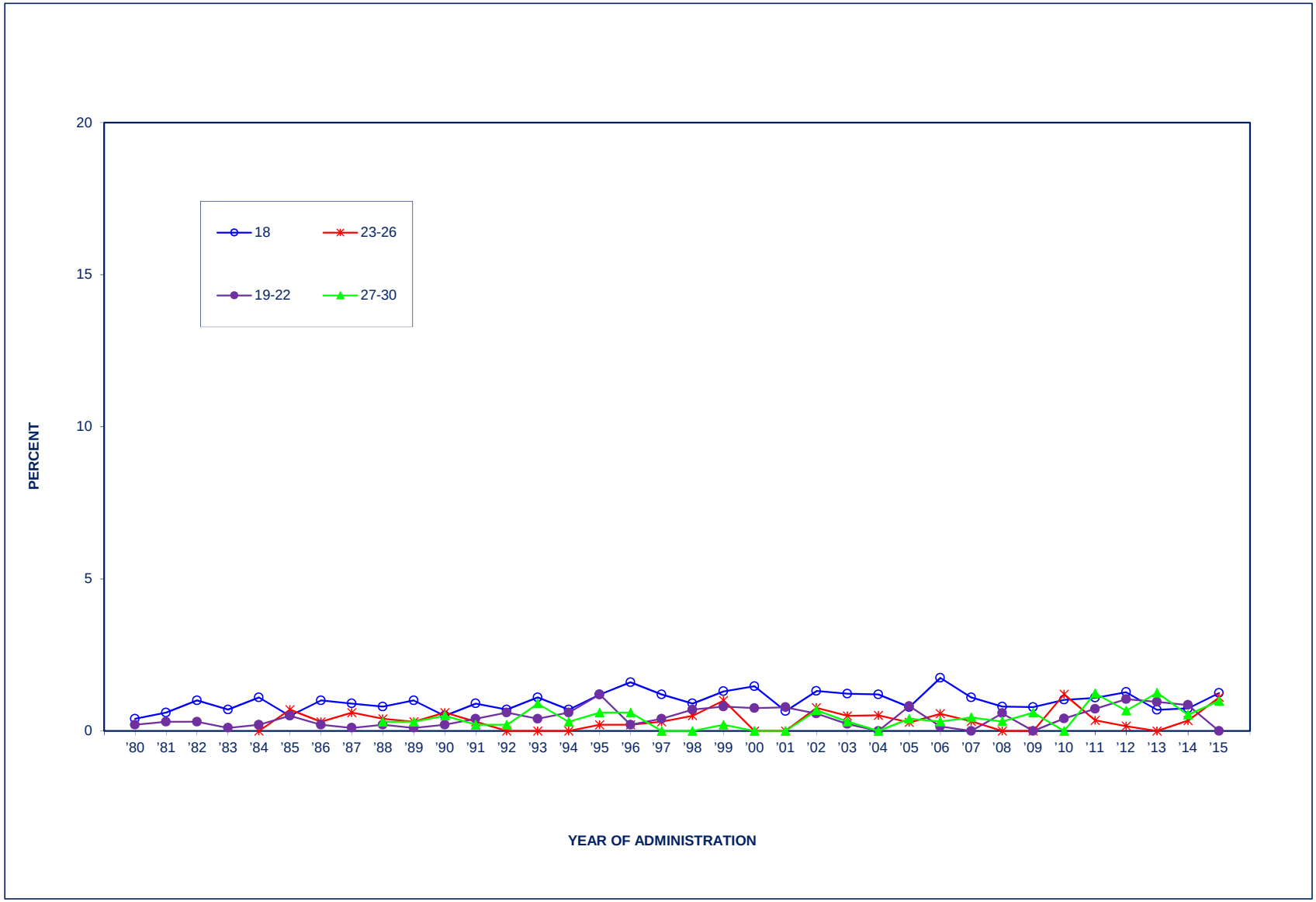
FIGURE 7-13
Trends in Exposure to Use of HEROIN
among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30



Source. The Monitoring the Future study, the University of Michigan.

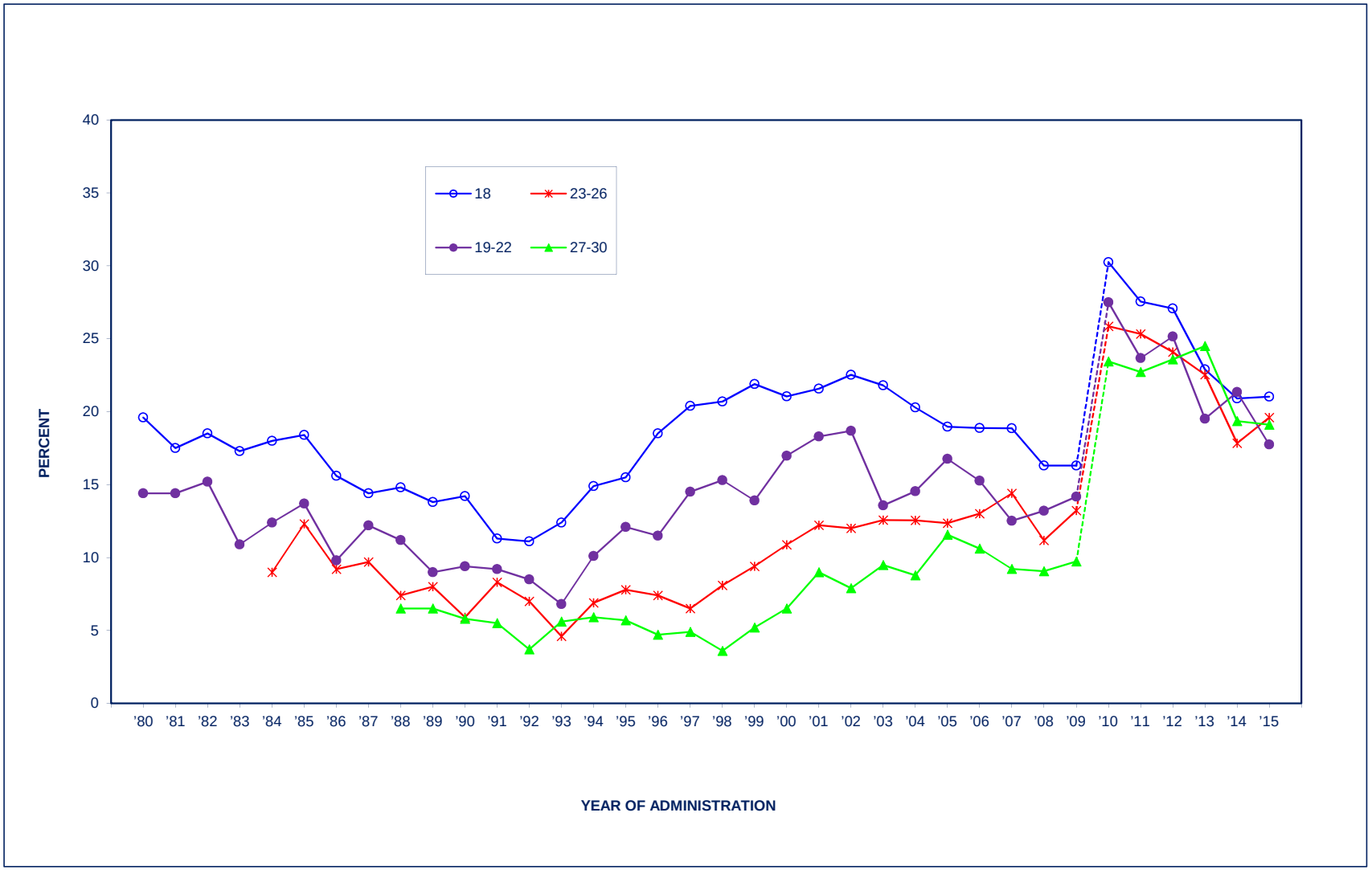
FIGURE 7-14
Trends in Exposure to Use of HEROIN
among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

% Saying Often Exposed



Source. The Monitoring the Future study, the University of Michigan.

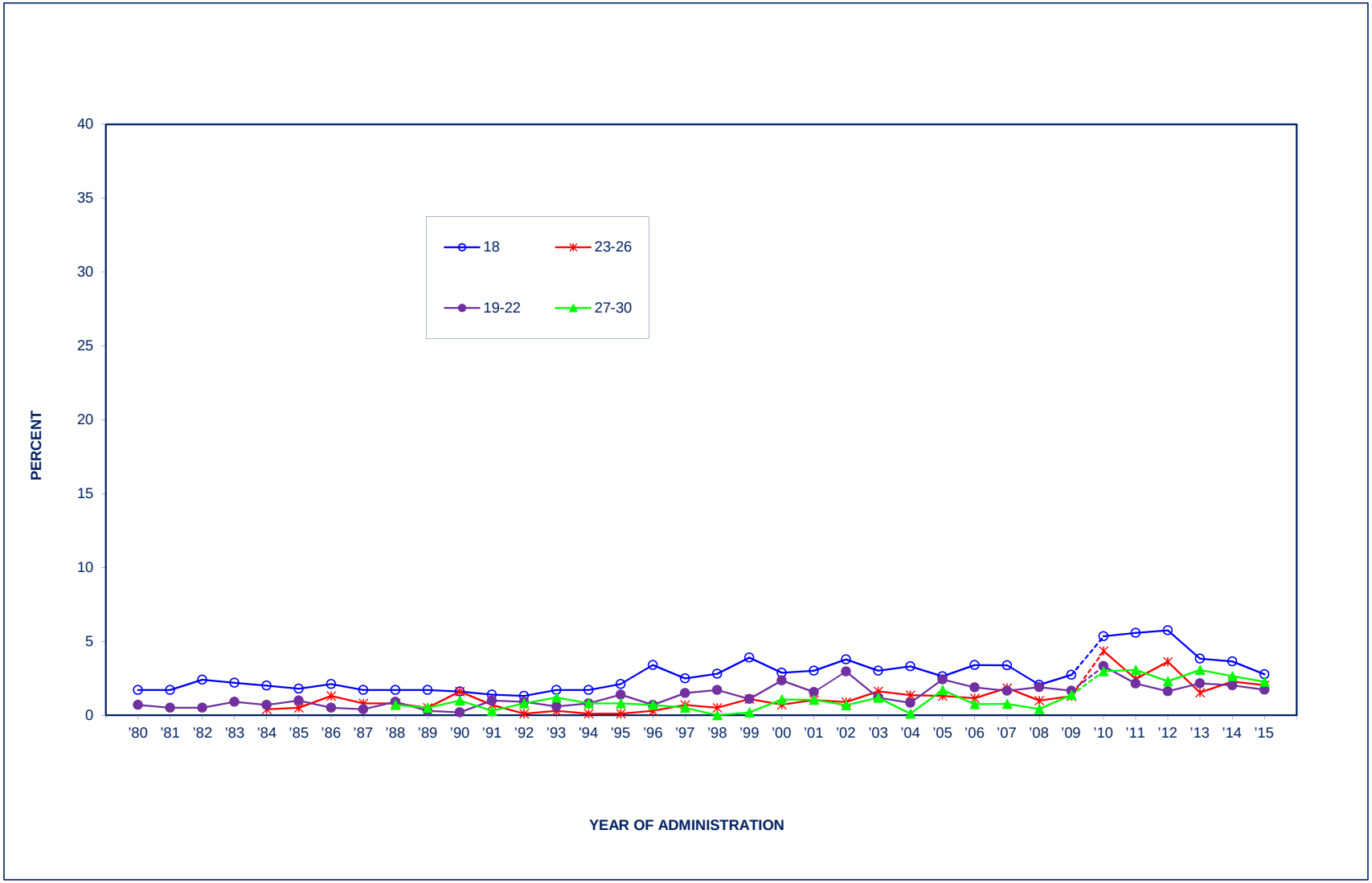
FIGURE 7-15
Trends in Exposure to Use of NARCOTICS OTHER THAN HEROIN[a] among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30



Source. The Monitoring the Future study, the University of Michigan.

[a]In 2010 the list of examples for narcotics other than heroin was changed from methadone, opium to Vicodin, OxyContin, Percocet, etc. This change likely explains the discontinuity in the 2010 results.

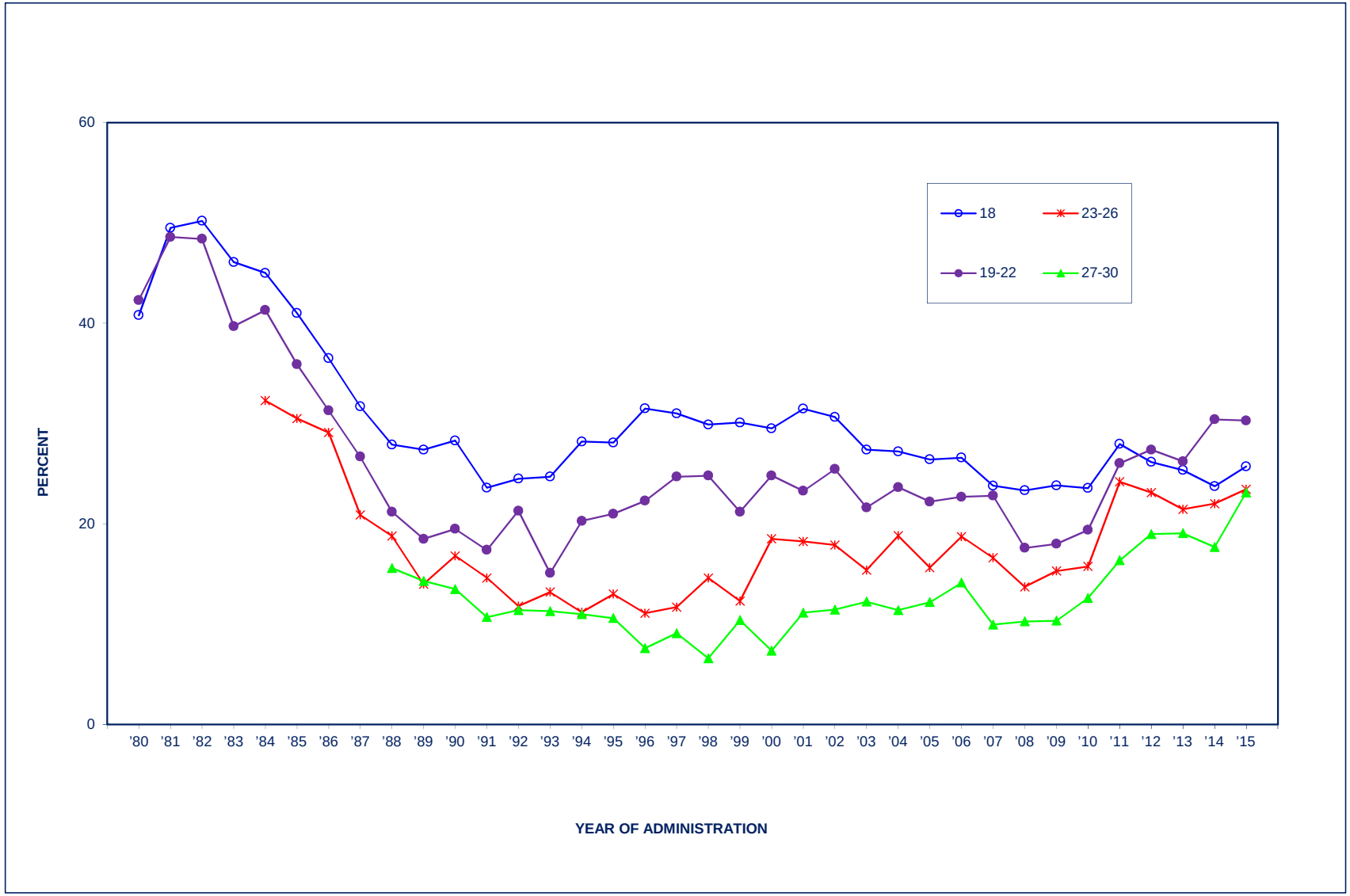
FIGURE 7-16
Trends in Exposure to Use of NARCOTICS OTHER THAN HEROIN[a] among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30



Source. The Monitoring the Future study, the University of Michigan.

[a]In 2010 the list of examples for narcotics other than heroin was changed from methadone, opium to Vicodin, OxyContin, Percocet, etc. This change likely explains the discontinuity in the 2010 results.

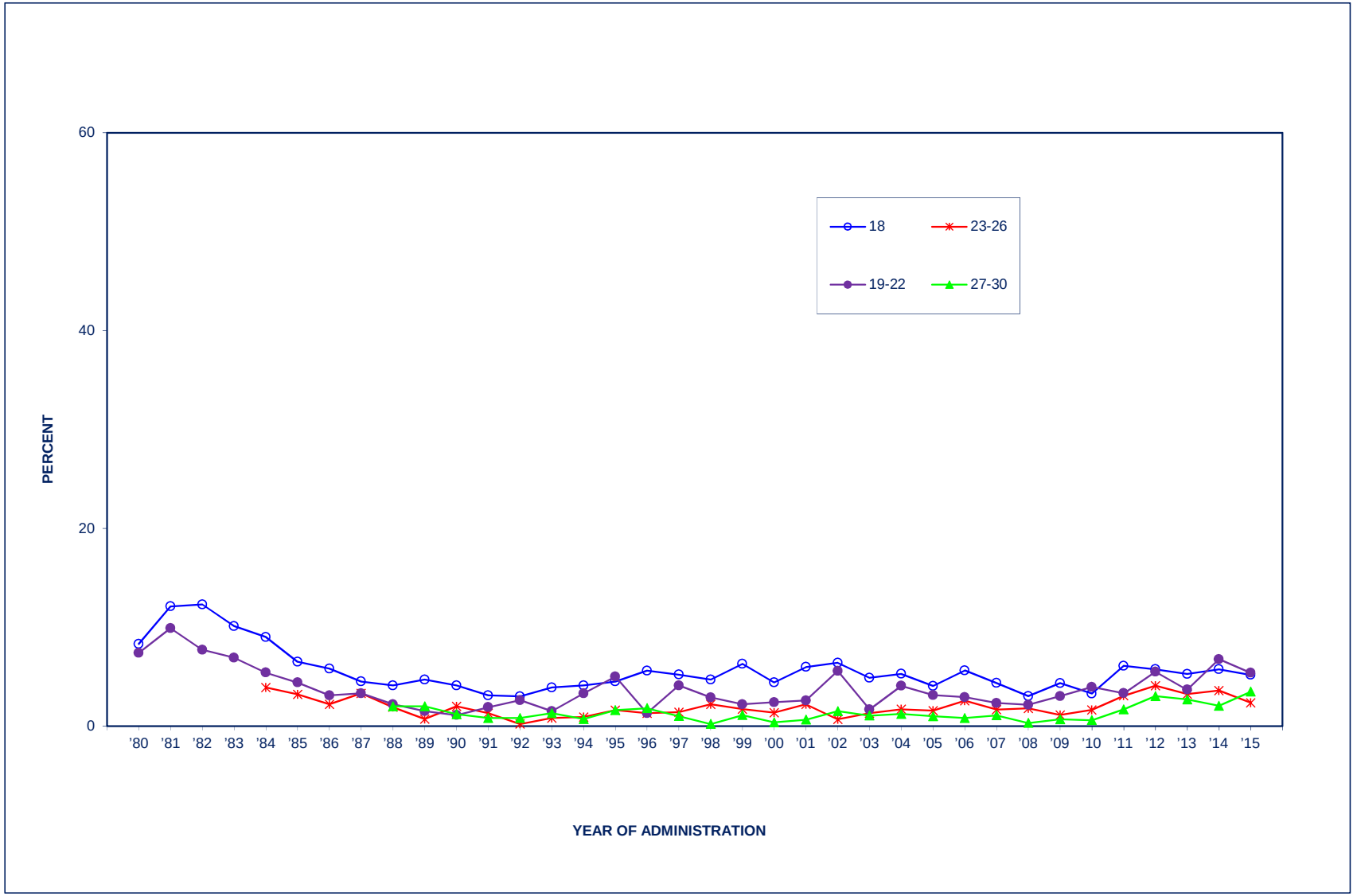
FIGURE 7-17
Trends in Exposure to Use of AMPHETAMINES[a]
among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30



Source. The Monitoring the Future study, the University of Michigan.

[a]In 2011 pep pills and bennies were replaced in the list of examples by Adderall and Ritalin. This change likely explains the discontinuity in the 2011 results.

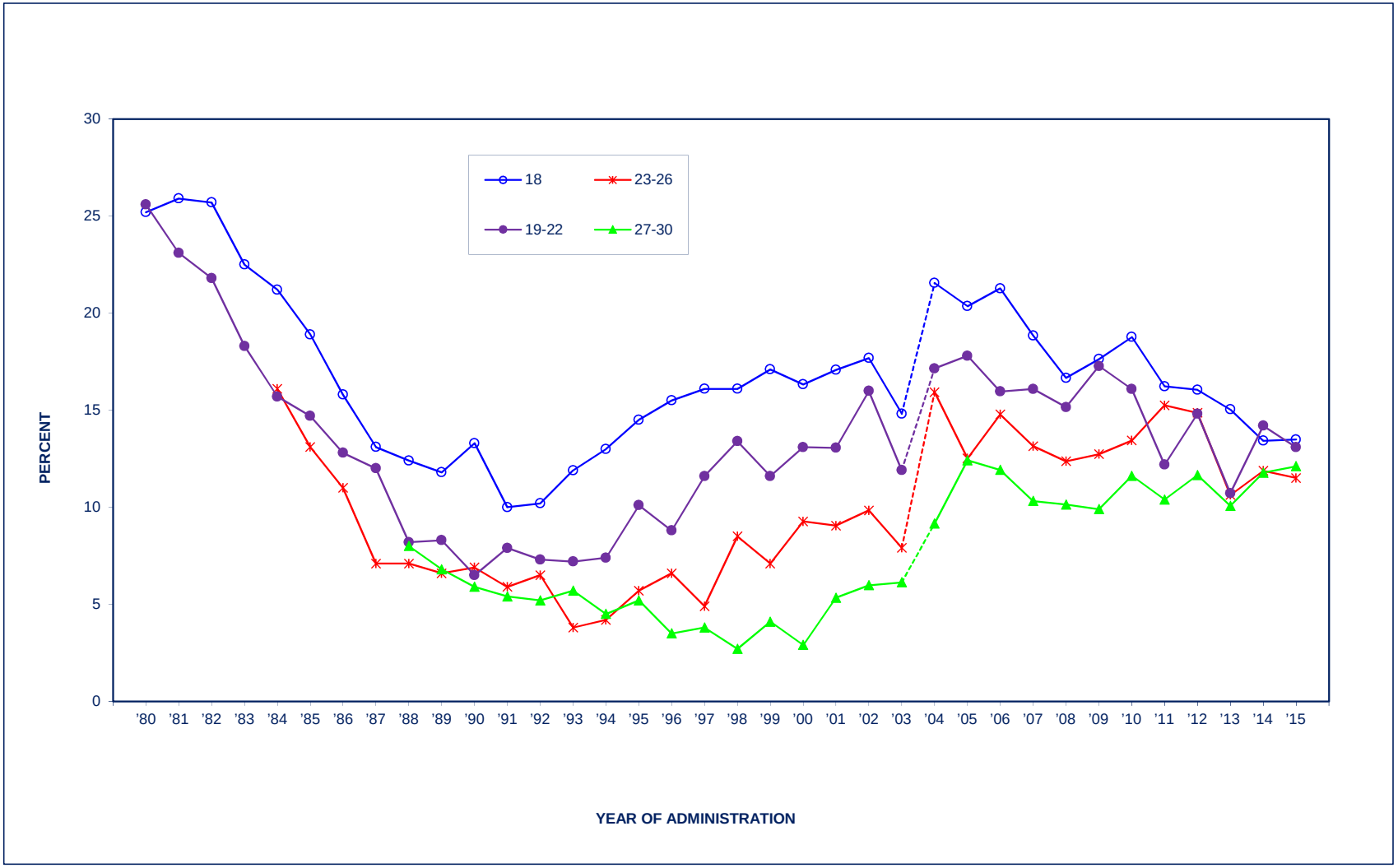
FIGURE 7-18
Trends in Exposure to Use of AMPHETAMINES[a]
among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30



Source. The Monitoring the Future study, the University of Michigan.

[a]In 2011 pep pills and bennies were replaced in the list of examples by Adderall and Ritalin. This change likely explains the discontinuity in the 2011 results.

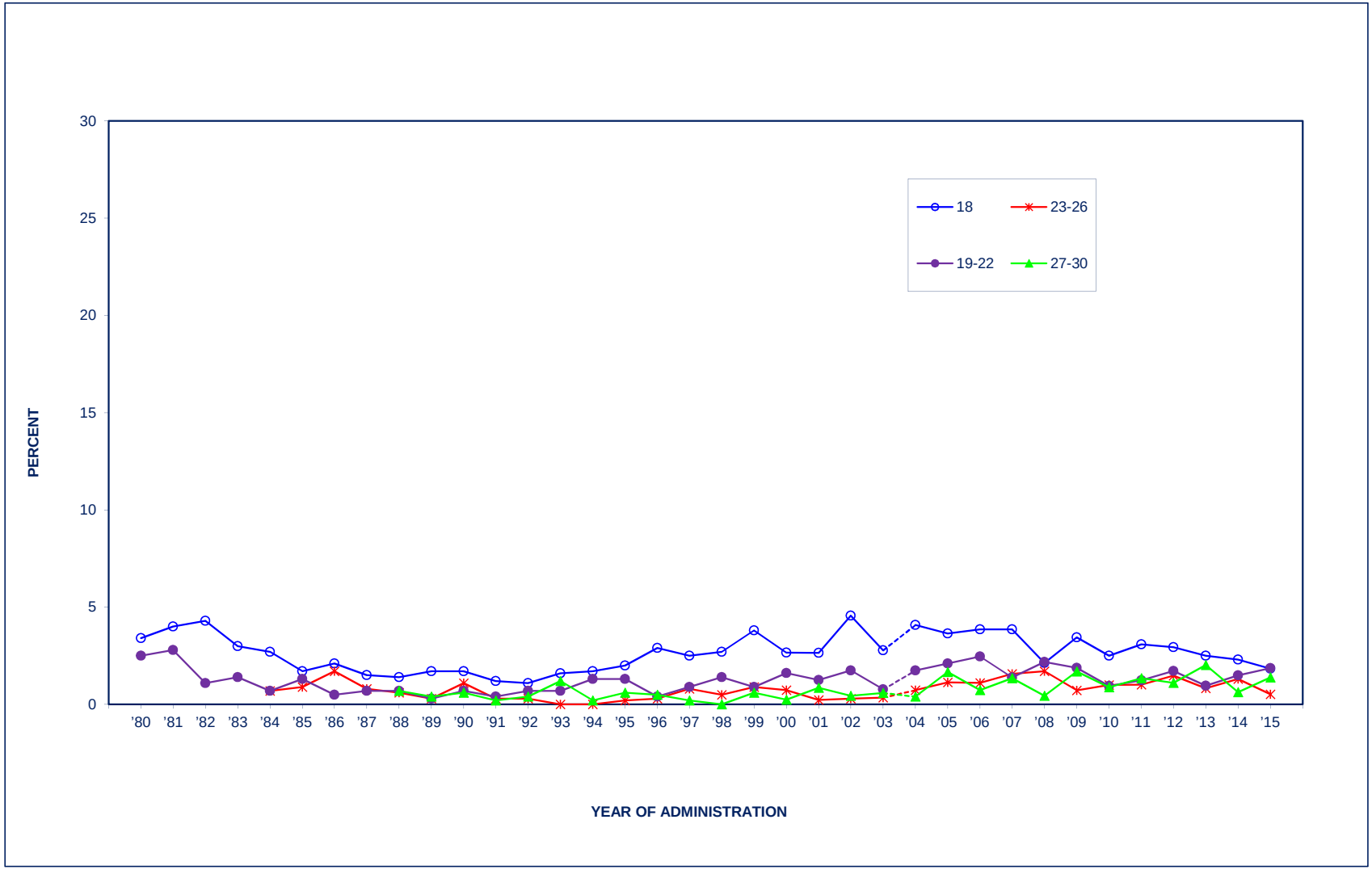
FIGURE 7-19
Trends in Exposure to Use of SEDATIVES (BARBITURATES)[a] among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30



Source. The Monitoring the Future study, the University of Michigan.

[a]In 2004 the question text was changed from barbiturates to sedatives/barbiturates and the list of examples was changed from downers, goofballs, reds, yellows, etc. to just downers. These changes likely explain the discontinuity in the 2004 results.

FIGURE 7-20
Trends in Exposure to Use of SEDATIVES (BARBITURATES)[a] among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30



Source. The Monitoring the Future study, the University of Michigan.

[a]In 2004 the question text was changed from barbiturates to sedatives/barbiturates and the list of examples was changed from downers, goofballs, reds, yellows, etc. to just downers. These changes likely explain the discontinuity in the 2004 results.

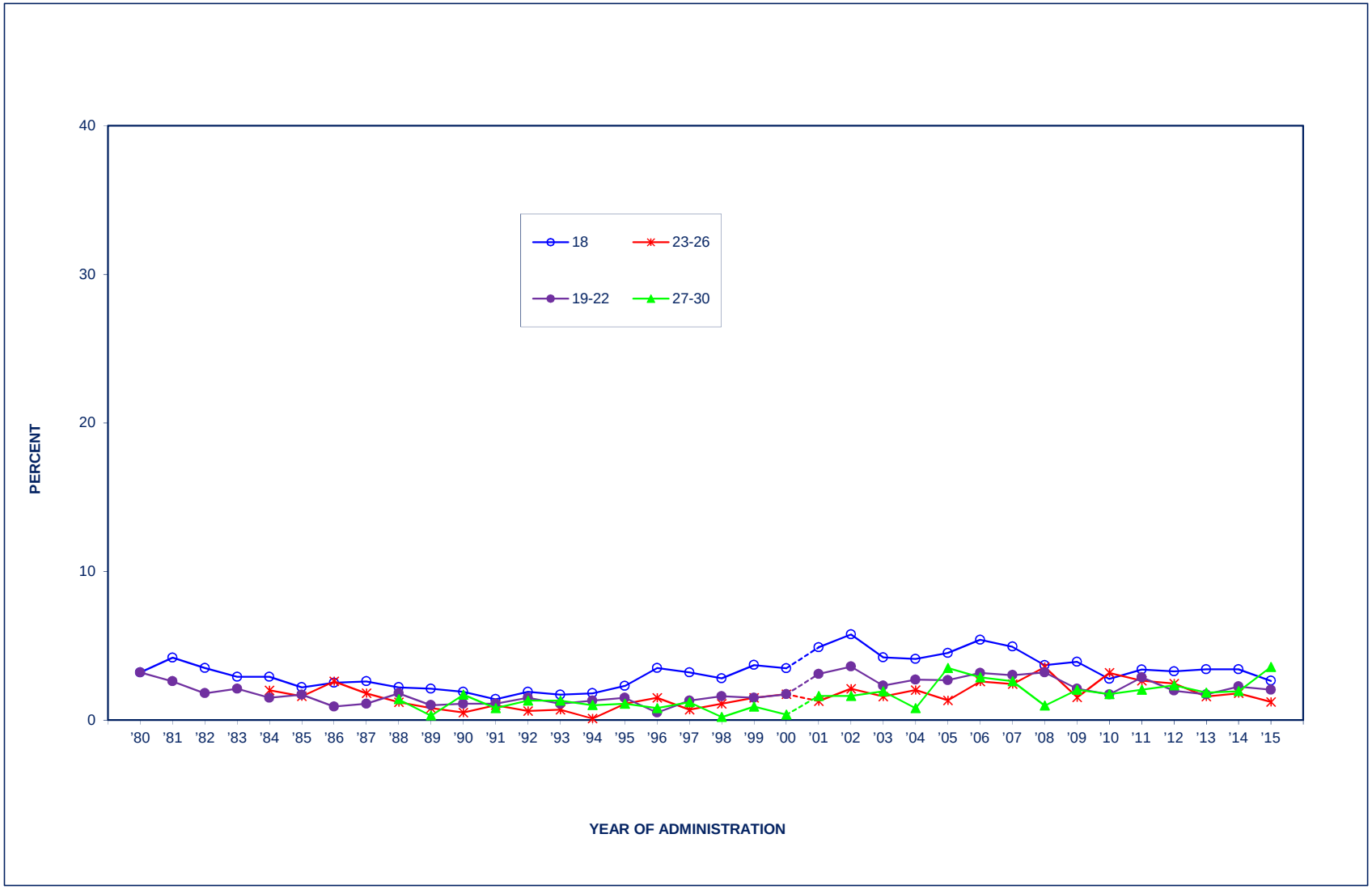
FIGURE 7-21
Trends in Exposure to Use of TRANQUILIZERS[a]
among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30



Source. The Monitoring the Future study, the University of Michigan.

[a]In 2001 Xanax was added to the list of examples. This change likely explains the discontinuity in the 2001 results.

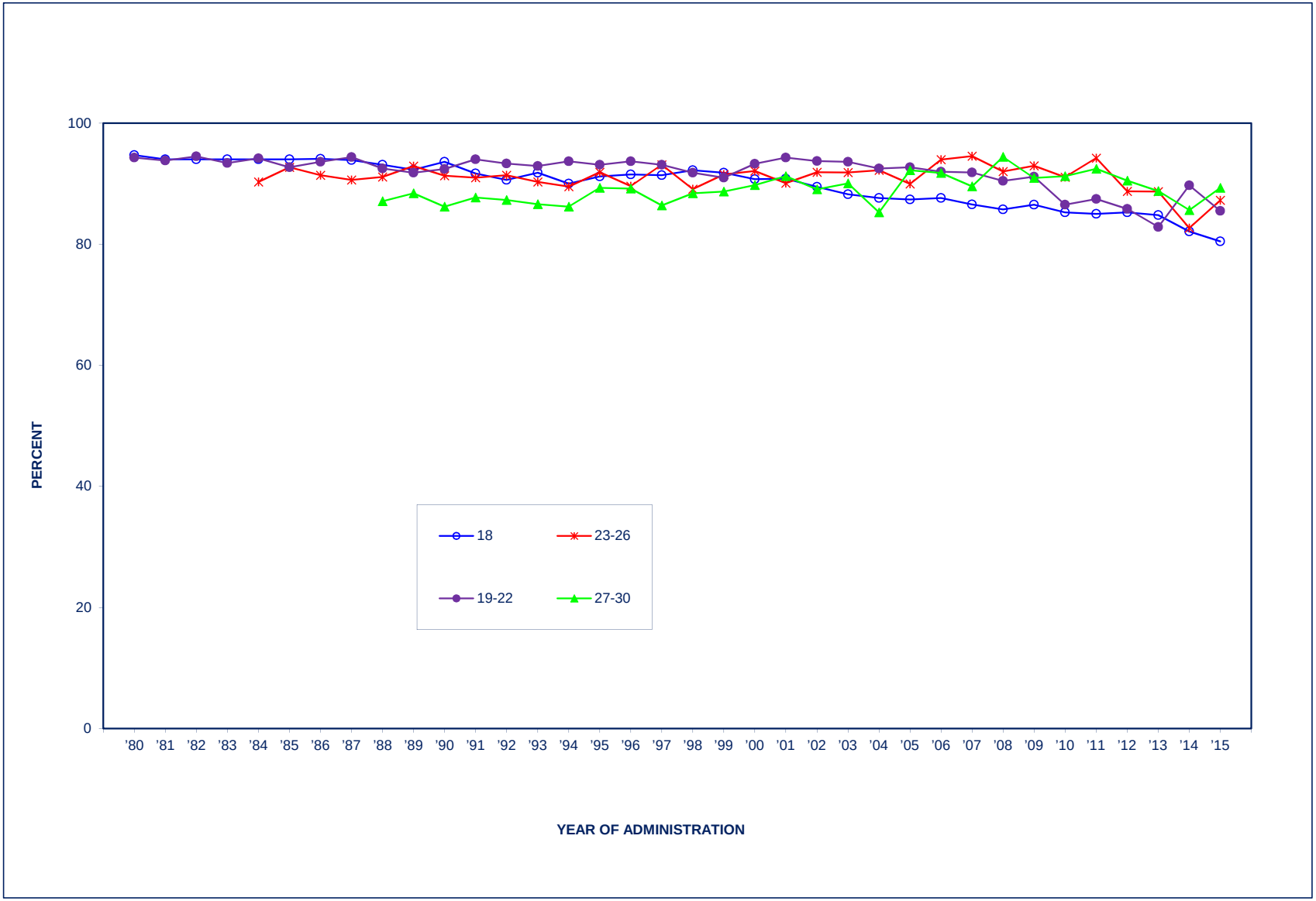
FIGURE 7-22
Trends in Exposure to Use of TRANQUILIZERS[a]
among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30



Source. The Monitoring the Future study, the University of Michigan.

[a]In 2001 Xanax was added to the list of examples. This change likely explains the discontinuity in the 2001 results.

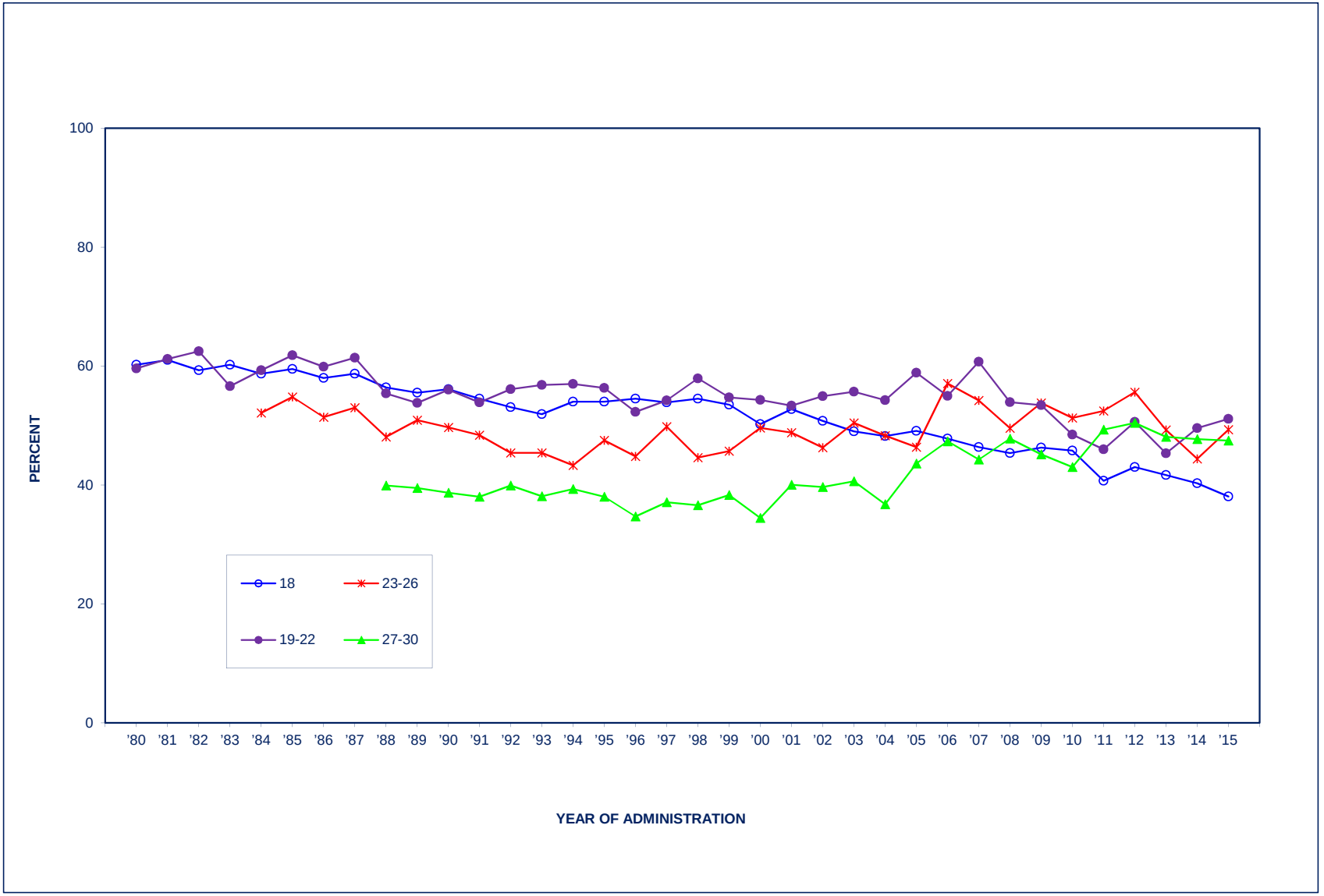
FIGURE 7-23
Trends in Exposure to Use of ALCOHOL
among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30



Source. The Monitoring the Future study, the University of Michigan.

FIGURE 7-24
Trends in Exposure to Use of ALCOHOL
among Respondents in Modal Age Groups of 18, 19–22, 23–26, and 27–30

% Saying Often Exposed



Source. The Monitoring the Future study, the University of Michigan.

Chapter 8

PREVALENCE OF DRUG USE AMONG COLLEGE STUDENTS AND THEIR NONCOLLEGE PEERS

College students have often been the harbingers of social and political changes that eventually spread to other segments of the population up and down the age spectrum. The Monitoring the Future (MTF) study tracks multiple forms of substance use among U.S. college students and has done so for more than a third of a century. In this process, MTF has been able to document the fluctuations in college substance use as well as some patterns of influence on or by other age groups. This chapter focuses on the prevalence of drug use in 2015 by college students and their age-peers not in college; the next chapter focuses on historical trends in drug use in these two groups.

Definition of College Students

College students are defined in this volume as those follow-up respondents *one to four years past high school* who report that they were taking courses as *full-time students* in a *two- or four-year undergraduate college* at the *beginning of March* of the year in question. Note that full-time students at two-year colleges, such as community colleges, are included.

The definition excludes those who are currently enrolled in college part-time and those who previously may have been college students or may have completed college. MTF has been able to generate an unparalleled national sample of college students and peers not in college every year since 1980 by following representative samples of sequential high school classes after they graduate. The graduating class of 1976 was the first such class followed after graduation, and by 1980 the survey included college students one to four years past high school.

The absence of dropouts in the original high school senior samples has practically no effect on the representativeness of these college samples, because very few high school dropouts go on to college. One notable limitation of the present design for the purpose of characterizing college students is that it limits the age range of the college sample. For trend estimation purposes, we decided to limit the age band to the most typical one for college attendance, that is, one to four years past high school, which corresponds to modal ages 19 through 22. According to the latest statistics available from the United States Census Bureau,[1] this age band should encompass about 75% of all undergraduate college students enrolled full-time in 2014, down slightly from the 79% covered in 1989. Although expanding the age band to include an additional two years would cover 79% of all enrolled college students of any age, it would slightly reduce the homogeneity of the college experience by including older classmates and would limit historical comparability. Special analyses conducted in 1985 and replicated in 1997 indicated extremely small differences in the estimates of drug use prevalence under the two definitions. The annual prevalence of all drugs except cocaine shifted only about one or two tenths of a percentage point. Cocaine, which had the greatest amount of age-related change at that time, would have had an annual prevalence rate only 0.8 percentage points higher using the six-year age span. Another replication of these analyses in 2011 yielded virtually the same results. Thus, for purposes of estimating all prevalence rates except

[1]U.S. Census Bureau, October 2014. Available at: http://www.census.gov/.

lifetime prevalence, the four- and six-year intervals are nearly interchangeable, suggesting that this limitation is negligible for our purposes of trend estimation.

The MTF panels also include high school graduates one to four years past high school who were *not* attending college during March in the year in question. Having longitudinal data for both groups is a rare and valuable feature of the MTF longitudinal design and makes it possible to compare differences and changes in the use of various substances after high school for each group. College students as defined here now constitute well over half (64%) of the entire follow-up sample one to four years past high school. If data from the missing high school dropout segment—which has declined from around 15% to roughly 9% of a class cohort—were available for inclusion as part of the noncollege segment, any difference between the two groups in terms of their substance use would likely be enlarged; therefore, any difference observed here is only an indication of the direction and relative size of difference between the college and the *entire* noncollege population, not an absolute estimate of the difference.

PREVALENCE OF DRUG USE AMONG COLLEGE STUDENTS VERSUS THEIR NONCOLLEGE PEERS

In 2015, prevalence of use for most illicit drugs among college students was *lower* compared with use among their noncollege peers, but the degree of difference varied considerably by drug, as Tables 8-1 through 8-4 show.

- In 2015, annual prevalence of use of ***any illicit drug*** was 41% for college students as well as for noncollege respondents. Annual prevalence of using ***any illicit drug other than marijuana*** was also equivalent in the two groups at 19%.

- The annual prevalence of ***marijuana*** use was only slightly lower among college students versus noncollege individuals in 2015 (38% vs. 39%, respectively), whereas the rate of current ***daily marijuana*** use was more than twice as high for the noncollege group (11.8%) compared to the college students (4.6%). See Table 8-4.

- It is clear that use of a number of ***illicit drugs other than marijuana*** tended to be distinctly higher among those not in college. (As previously noted, such differences would likely be larger if the noncollege sample included high school dropouts.) In fact, several drugs showed annual use rates for noncollege respondents in 2015 that were two or more times the college student rates, including ***synthetic marijuana***, ***salvia, crack, heroin***, ***heroin without a needle***, ***OxyContin, Vicodin***, ***methamphetamine, crystal methamphetamine***, ***bath salts*** (***synthetic stimulants***), ***GHB***, and ***ketamine***.

- In 2015, nontrivial proportions of both the noncollege group (5.9%) and the college group (3.3%) reported past-year use of ***narcotics other than heroin*** without medical supervision. With respect to specific drugs in this class, ***Vicodin*** was used by 5.2% of the noncollege group vs. 1.6% of college students; the corresponding numbers for ***OxyContin*** were 4.3% and 1.5%.

- By way of contrast, ***amphetamine*** use was somewhat higher among college students than among their noncollege age-mates. Annual prevalence of amphetamine use among college

students was 9.7% in 2015, compared to 8.1% in the noncollege group. Specifically, annual prevalence of ***Adderall*** use without medical supervision (Table 8-2) was somewhat higher for college students (10.7%) than for noncollege respondents (7.1%), as has been the case for the last five years. The higher use by college students is very likely because this amphetamine drug, intended for the treatment of attention deficit hyperactivity disorder (ADHD), is sometimes used by students to stay awake and alert in order to complete course work and to study for exams. However, in 2015 the use of ***Ritalin***, another stimulant drug prescribed for ADHD, was the same across the two groups (both at 2.0%).

- ***Alcohol*** use was clearly higher in the college group than in the noncollege group in 2015, for both annual (79% vs. 71%) and 30-day (63% vs. 51%) prevalence.

- College students also had a higher prevalence (32%) of ***occasions of heavy drinking*** (five or more drinks in a row in the past two weeks) than their noncollege peers (24%). Indeed, nearly four in every ten college students (38%) reported having ***been drunk*** in the prior 30 days, compared to 25% of the noncollege respondents. The groups did not differ as much in their rates of ***daily drinking***, with 3.1% of college students and 2.2% of their noncollege peers reporting such use (Table 8-4). In high school, college-bound students, especially in earlier grades, were far less likely to drink alcohol at any level compared to their non-college-bound peers; thus, the relative and absolute increases in alcohol use among college students in the first few years following high school were quite striking.

- Because of increasing attention paid to the problem of ***extreme binge drinking***, in 2005 we introduced a set of questions on the subject into one of the six questionnaire forms used with young adults, including college students. The questions asked respondents about the frequency in the past two weeks of having 10 or more drinks in a row and also of having 15 or more drinks in a row. The low numbers of cases that resulted from a single questionnaire form necessitate combining multiple years of data (2005–2015), making 2,225 weighted cases available from the college student population and 1,313 for the noncollege young adults of the same age. About one in eight college students (13%) reported having ***10 or more drinks in a row*** at least once in the prior two weeks, and one in twenty (5%) reported ***15 or more drinks in a row*** at least once. The noncollege respondents had essentially identical respective rates (12% and 5%). We lack longer-term data on these measures to determine whether this type of extreme drinking behavior has changed longer term, but clearly it has been quite high in recent years among both college students and their noncollege peers. In general, the trending since 2005 has been downward as is shown in Chapter 9, Table 9-5. As will be discussed below, there are dramatic gender differences in the prevalence of these behaviors.

- In 2015, 65% of college students reported using ***flavored alcoholic beverages*** in the prior year, compared to 54% of the noncollege group.

- Among all substances studied, the largest differences for annual, 30-day, and daily prevalence rates between the two groups occur for ***cigarette smoking***. For example, the prevalence of daily smoking for college students was 4% versus 16% for noncollege respondents in 2015 (Table 8-4). Smoking at the rate of a half pack or more per day stood at 1% versus 9% for these two groups, respectively. The 12th-grade data show the college-

bound to have much lower smoking rates in high school than the non-college-bound; thus, in contrast to what was true for alcohol use, these substantial differences observed at college age actually largely preceded college attendance.[2] The smoking differences would be even greater if dropouts were included in the noncollege group, because dropouts have consistently shown an exceptionally high rate of smoking.[3]

In sum, the noncollege segment was generally more drug-involved than the college student segment. This pattern is a continuation of the high school pattern in which those without college plans are more likely to use drugs, despite the fact that the two groups are equivalent in proportions of who used ***any illicit*** drug in the past year. The only substances that college students were appreciably more likely to use than their noncollege peers were ***amphetamines*** (including ***Adderall*** in particular) and ***alcohol*** (particularly ***getting drunk*** and ***binge drinking***). The higher rates of alcohol use among college students emerged only after high school; during high school alcohol use was lower among those who would later go on to college.

GENDER DIFFERENCES IN PREVALENCE OF USE AMONG COLLEGE STUDENTS AND THEIR NONCOLLEGE PEERS

Data stratified by gender are provided in Tables 8-1 to 8-4.

- Most gender differences among college students replicated those discussed in Chapter 4 for all young adults one to 12 years past high school, and they in turn replicated gender differences among secondary school students. Thus among college students, males had higher annual prevalence rates for most illicit drugs.

- Among college students in 2015, annual prevalence of use of ***any illicit drug*** and ***any illicit drug other than marijuana*** was higher for males than females (45% vs. 39% for any illicit drug and 25% vs. 15% for any illicit drug other than marijuana). Gender differences were smaller among the noncollege group. Annual ***marijuana*** use was slightly higher among college males than females (40% vs. 37%) and the same was true for the noncollege group (41% vs. 37%)***. Daily marijuana*** use was about twice as high among male college students compared to female college students (6.7% vs. 3.4% respectively); in the noncollege group, the rates of use for both genders were much higher, and again they were higher among males (13.5%) than among females (10.3%).

- Most ***hallucinogens*** showed distinctly higher annual prevalence rates among male versus female college students. Among the noncollege respondents the differences were in the same direction.

- Among college students, annual prevalence of ***narcotics other than heroin*** without medical supervision was higher for males (5.6%) than for females (1.9%); among the noncollege group females (6.5%) were only slightly higher than the males (5.2%). For the

[2]See also Bachman, J. G., Wadsworth, K. N., O'Malley, P. M., Johnston, L. D., & Schulenberg, J. E. (1997). *Smoking, drinking, and drug use in young adulthood: The impacts of new freedoms and new responsibilities.* Mahwah, NJ: Lawrence Erlbaum Associates.

[3]For an analysis showing much higher smoking rates among 8th graders who later dropped out before completing high school, see Bachman, J. G., O'Malley, P. M., Schulenberg, J. E., Johnston, L. D., Freedman-Doan, P., & Messersmith, E. E. (2008). *The education–drug use connection: How successes and failures in school relate to adolescent smoking, drug use, and delinquency.* New York: Lawrence Erlbaum Associates/Taylor & Francis.

specific narcotic ***Vicodin,*** use among college students was somewhat higher for males than females (2.2% vs. 1.3%), as was the case in the noncollege group (5.6% vs. 4.9%). For ***OxyContin*** use, males were higher than females among college students (3.2% vs. 0.4%) and among the noncollege group (6.3% vs. 2.7%).

- Annual ***amphetamine*** use also was higher among college males (13.2%) than college females (7.7%), but there was a reversal of the gender difference in the noncollege segment (7.4% for males and 8.7% for females). These differences suggests that college males are more likely than females to use amphetamines to enhance academic performance and possibly to mitigate the effects of alcohol and other drugs.[4]

- Annual ***Ritalin*** use without medical supervision was higher among college males (3.2%) than females (1.2%), and in the noncollege segment use among males was also higher than among females (2.6% vs. 1.5%, respectively).

- The annual prevalence of ***Adderall*** use outside of medical supervision was higher among male college students (one in every seven college males, or 14.8%) than female college students (8.1%), and use was also higher among males than among females in the noncollege segment (7.4% vs. 6.8%, respectively). Again, the higher use of amphetamines among male and female college students compared with male and female noncollege respondents suggests that some college students of both genders could be using these drugs to enhance their academic performance.

- Males were more likely than females to report ***being drunk*** in the past 30 days (44% vs. 34% in the college group) with a similar gender difference in the noncollege group (30% vs. 20, respectively). Gender differences in ***binge drinking*** were similar among college students (37% for males and 29% for females) and among those not in college (28% and 21%, respectively; see Table 8-4).

- ***Extreme levels of binge drinking*** showed a large gender difference in both groups. For the years 2005–2015 combined, the prevalence of having ***10 or more drinks in a row*** in the prior two weeks was about three times higher among college males (22%) than among college females (7%) and similarly higher among noncollege males (18%) than noncollege females (7%). Prevalence of extreme binge drinking for college males (22%) exceeded that for noncollege males (18%), whereas college and noncollege females were similar (7% each). Regarding the prevalence of having ***15 or more drinks in a row***, gender differences were similar across college and noncollege respondents: it was 9.1% and 9.4% for college and noncollege males, respectively, and 1.7% and 2.1% for college and noncollege females, respectively. Put another way, nearly one in four college males and one in five noncollege males had 10 or more drinks at least once during the prior two weeks, and one in ten or eleven males regardless of college student status reported having 15 or more drinks at least once in the past two weeks.

[4]Arria, A. M., O'Grady, K. E., Caldeira, K. M., Vincent, K. B., & Wish, E. D. (2008). Nonmedical use of prescription stimulants and analgesics: associations with social and academic behaviors among college students. Journal of Drug Issues, 38(4), 1045-1060.

- ***Flavored alcoholic beverages*** were *more* likely to be consumed by college females than college males (73% vs. 50% reporting past-year use), but the gender difference was considerably smaller in the noncollege group (58% of females vs. 49% of males) in 2015.

- Among college students, 30-day prevalence of ***cigarette smoking*** was higher for males (16%) than for females (9%) in 2015, with a smaller gender difference in the noncollege segment (25% and 22%, respectively); rates for both genders were much higher in the noncollege group. ***Daily smoking*** was reported by more males than females in the college segment (6.1% vs. 3.0%); the rates again were much higher in the noncollege segment (15% for males and 16% for females). Put another way, daily smoking was two and a half times as high among males in the noncollege segment as among male college students (15% vs. 6.1%), and among females daily smoking was about five times as high among those not in college as among those in college (16% vs. 3.0%). Rates of ***smoking a half pack or more per day*** were 1.4% for both males and females among college students, compared with 10.5% and 7.9% for the noncollege segment, respectively.

In sum, most licit and illicit drugs were used by a higher proportion of college males than college females, with the largest proportional differences occurring for various ***hallucinogens***, ***daily marijuana use***, and ***extreme binge drinking***. Compared with noncollege males, college males were also more frequent users of ***alcohol*** and ***Adderall*** (outside of medical supervision), but considerably less likely to use ***marijuana daily***. The most impressive difference between the college and noncollege segments is for ***cigarette smoking***.

TABLE 8-1
Lifetime Prevalence of Use for Various Types of Drugs, 2015: Full-Time College Students vs. Others among Respondents 1 to 4 Years beyond High School by Gender

(Entries are percentages.)

	Total		Males		Females	
	Full-Time College	Others	Full-Time College	Others	Full-Time College	Others
Any Illicit Drug [a]	53.4	59.7	55.1	61.5	52.5	58.2
Any Illicit Drug other than Marijuana [a]	26.4	33.3	31.0	33.0	23.8	33.6
Marijuana	50.4	57.3	51.5	59.0	49.7	55.9
Inhalants [b]	3.1	7.4	2.8	4.2	3.3	10.0
Hallucinogens [c]	6.5	10.6	10.2	11.9	4.4	9.5
LSD [c]	4.8	7.7	7.4	8.0	3.4	7.4
Hallucinogens other than LSD [c]	5.1	8.5	8.6	10.9	3.2	6.6
Ecstasy (MDMA) [d]	8.9	12.1	10.1	12.8	8.1	11.6
Cocaine	6.1	8.9	9.0	11.3	4.3	7.0
Crack [c]	0.5	2.2	0.2	3.1	0.6	1.5
Other Cocaine [d]	6.4	7.2	9.4	11.5	4.6	3.9
Heroin	0.2	1.3	0.4	1.5	0.1	1.1
With a Needle [e]	0.3	0.6	0.7	0.6	*	0.5
Without a Needle [e]	0.4	2.3	0.7	1.7	0.2	2.8
Narcotics other than Heroin [f]	6.6	14.2	9.7	13.8	4.8	14.5
Amphetamines, Adjusted [f,g]	13.9	15.7	17.6	15.1	11.8	16.3
Methamphetamine [e]	0.8	1.4	1.6	0.9	0.2	1.9
Crystal Methamphetamine (Ice) [e]	0.3	2.4	0.8	1.5	*	3.1
Sedatives (Barbiturates) [f]	4.4	8.0	4.6	7.7	4.3	8.3
Tranquilizers [f]	7.8	10.8	8.2	9.0	7.5	12.1
Alcohol	81.4	76.9	80.6	74.6	81.8	78.8
Been Drunk [b]	68.6	66.4	67.7	68.4	69.1	64.6
Flavored Alcoholic Beverages [h]	74.8	72.7	64.3	62.8	80.8	79.7
Cigarettes	—	—	—	—	—	—
Electronic Vaporizers [e]	26.0	43.7	30.7	46.2	23.6	41.7
Steroids [e]	0.6	1.1	1.6	1.1	*	1.0
Approximate Weighted N =	*1,020*	*570*	*380*	*260*	*640*	*310*

Source. The Monitoring the Future study, the University of Michigan.

Notes. ' * ' indicates a prevalence rate of less than 0.05%.

' — ' indicates data not available.

See footnotes following Table 8-4.

TABLE 8-2
Annual Prevalence of Use for Various Types of Drugs, 2015: Full-Time College Students vs. Others among Respondents 1 to 4 Years beyond High School by Gender

(Entries are percentages.)

	Total		Males		Females	
	Full-Time College	Others	Full-Time College	Others	Full-Time College	Others
Any Illicit Drug [a]	41.4	41.1	45.2	42.7	39.2	39.7
Any Illicit Drug other than Marijuana [a]	18.5	19.1	24.6	19.4	14.9	19.0
Marijuana	37.9	38.7	40.2	40.5	36.6	37.3
Synthetic Marijuana [b]	1.5	3.4	1.6	5.8	1.5	1.4
Inhalants [b]	0.6	1.5	0.4	0.4	0.7	2.4
Hallucinogens [c]	4.3	6.7	6.6	7.1	3.0	6.3
LSD [c]	3.0	4.6	4.9	4.7	2.0	4.6
Hallucinogens other than LSD [c]	3.0	4.3	4.8	5.4	2.0	3.4
Ecstasy (MDMA) [d]	4.2	5.8	5.0	6.4	3.7	5.3
Salvia [b]	0.4	2.3	1.0	4.4	*	0.7
Cocaine	4.3	5.4	6.4	5.9	3.0	4.9
Crack [c]	0.2	0.7	0.2	0.3	0.3	1.1
Other Cocaine [d]	4.2	4.5	6.4	7.0	3.0	2.5
Heroin	0.1	0.6	0.3	0.6	0.1	0.6
With a Needle [e]	0.1	*	0.4	*	*	*
Without a Needle [e]	*	1.2	*	0.6	*	1.8
Narcotics other than Heroin [f]	3.3	5.9	5.6	5.2	1.9	6.5
OxyContin [b,f]	1.5	4.3	3.2	6.3	0.4	2.7
Vicodin [b,f]	1.6	5.2	2.2	5.6	1.3	4.9
Amphetamines, Adjusted [f,g]	9.7	8.1	13.2	7.4	7.7	8.7
Ritalin [b,f]	2.0	2.0	3.2	2.6	1.2	1.5
Adderall [b,f]	10.7	7.1	14.8	7.4	8.1	6.8
Methamphetamine [e]	0.5	1.0	1.3	*	*	1.9
Crystal Methamphetamine (Ice) [e]	*	0.6	*	*	*	1.0
Bath Salts (synthetic stimulants) [b]	0.1	1.0	0.2	1.5	*	0.7
Sedatives (Barbiturates) [f]	2.3	3.8	2.4	4.0	2.2	3.7
Tranquilizers [f]	4.3	5.9	5.1	4.6	3.8	6.9
GHB [e]	*	1.0	*	1.6	*	0.5
Ketamine [e]	0.6	1.8	1.0	3.5	0.4	0.4
Alcohol	79.0	70.7	78.7	69.1	79.2	72.1
Been Drunk [b]	61.6	51.4	64.1	55.1	60.0	48.2
Flavored Alcoholic Beverages [h]	64.5	54.2	50.3	49.2	72.7	57.7
Alcoholic Beverages containing Caffeine [e]	34.1	32.5	38.4	36.0	31.3	29.5
Cigarettes	20.1	34.7	24.9	34.5	17.2	34.9
Tobacco using a Hookah [b]	23.4	24.5	24.5	24.5	22.8	24.4
Small Cigars [e]	19.6	19.3	30.8	31.1	12.5	9.3
Dissolvable Tobacco [e]	1.1	0.1	2.8	0.3	*	*
Snus [e]	5.8	6.4	14.8	11.7	*	2.0
Steroids [e]	0.3	0.5	0.7	1.1	*	*
Approximate Weighted N =	*1,020*	*570*	*380*	*260*	*640*	*310*

Source. The Monitoring the Future study, the University of Michigan.

Notes. ' * ' indicates a prevalence rate of less than 0.05%.

See footnotes following Table 8-4.

TABLE 8-3
Thirty-Day Prevalence of Use for Various Types of Drugs, 2015: Full-Time College Students vs. Others among Respondents 1 to 4 Years beyond High School by Gender

(Entries are percentages.)

	Total		Males		Females	
	Full-Time College	Others	Full-Time College	Others	Full-Time College	Others
Any Illicit Drug [a]	23.4	28.2	27.4	29.3	21.1	27.3
Any Illicit Drug other than Marijuana [a]	9.2	9.2	12.9	11.4	7.1	7.3
Marijuana	21.1	25.4	25.5	27.0	18.5	24.0
Inhalants [b]	0.2	*	0.2	*	0.1	*
Hallucinogens [c]	1.4	1.6	1.9	2.3	1.1	1.1
LSD [c]	0.7	1.2	0.7	1.8	0.8	0.7
Hallucinogens other than LSD [c]	0.9	0.4	1.3	0.5	0.6	0.4
Ecstasy (MDMA) [d]	0.7	1.5	0.8	1.4	0.7	1.6
Cocaine	1.5	1.2	2.8	1.2	0.7	1.2
Crack [c]	*	0.2	*	0.3	*	0.2
Other Cocaine [d]	1.4	1.3	2.7	1.6	0.6	1.1
Heroin	*	0.2	*	0.2	0.1	0.2
Narcotics other than Heroin [f]	1.3	2.1	2.0	2.5	0.8	1.8
Amphetamines, Adjusted [f,g]	4.2	3.3	6.6	4.2	2.7	2.5
Crystal Methamphetamine (Ice) [e]	*	0.6	*	*	*	1.0
Sedatives (Barbiturates) [f]	1.0	1.7	0.4	1.6	1.4	1.8
Tranquilizers [f]	1.6	2.0	1.6	2.1	1.6	1.9
Alcohol	63.2	51.1	63.9	55.7	62.7	47.4
Been Drunk [b]	38.4	24.9	44.4	30.3	34.4	20.1
Flavored Alcoholic Beverages [h]	30.5	26.3	24.3	22.5	34.0	29.1
Cigarettes	11.3	23.4	15.5	25.0	8.8	22.1
Electronic Vaporizers [e]	8.8	12.9	14.4	14.9	5.9	11.3
Large Cigars [h]	4.9	3.2	8.5	2.0	2.8	3.9
Flavored Little Cigars [h]	5.6	13.1	8.4	10.4	3.8	14.8
Regular Little Cigars [h]	4.1	5.2	7.2	7.2	2.2	3.9
Steroids [e]	0.3	*	0.7	*	*	*
Approximate Weighted N =	*1,020*	*570*	*380*	*260*	*640*	*310*

Source. The Monitoring the Future study, the University of Michigan.

Notes. ' * ' indicates a prevalence rate of less than 0.05%.

See footnotes following Table 8-4.

TABLE 8-4
Thirty-Day Prevalence of Daily [i] Use for Various Types of Drugs, 2015: Full-Time College Students vs. Others among Respondents 1 to 4 Years beyond High School by Gender

(Entries are percentages.)

	Total		Males		Females	
	Full-Time College	Others	Full-Time College	Others	Full-Time College	Others
Marijuana	4.6	11.8	6.7	13.5	3.4	10.3
Cocaine	*	0.1	*	0.2	*	*
Amphetamines, Adjusted [f,g]	0.1	*	0.2	*	*	*
Alcohol						
Daily	3.1	2.2	4.3	3.0	2.4	1.6
5+ Drinks in a Row in Last 2 Weeks	31.9	23.7	37.3	27.6	28.6	20.6
Cigarettes						
Daily	4.2	15.5	6.1	14.5	3.0	16.3
1/2 Pack+/Day	1.4	9.1	1.4	10.5	1.4	7.9
Approximate Weighted N =	*1,020*	*570*	*380*	*260*	*640*	*310*

Source. The Monitoring the Future study, the University of Michigan.

Notes. ' * ' indicates a prevalence rate of less than 0.05%.

See footnotes on the following page.

Footnotes for Tables 8-1 through 8-4

[a]Use of any illicit drug includes any use of marijuana, hallucinogens, cocaine, heroin or other narcotics, amphetamines, sedatives (barbiturates), or tranquilizers not under a doctor's orders.

[b]This drug was asked about in three of the six questionnaire forms. Total *N* in 2015 for college students is approximately 510.

[c]This drug was asked about in five of the six questionnaire forms. Total *N* in 2015 for college students is approximately 850.

[d]This drug was asked about in four of the six questionnaire forms. Total *N* in 2015 for college students is approximately 680.

[e]This drug was asked about in two of the six questionnaire forms. Total *N* in 2015 for college students is approximately 340.

[f]Only drug use that was not under a doctor's orders is included here.

[g]Based on the data from the revised question, which attempts to exclude inappropriate reporting of nonprescription amphetamines.

[h]This drug was asked about in one of the six questionnaire forms. Total *N* in 2015 for college students is approximately 170.

[i]Daily use is defined as use on 20 or more occasions in the past 30 days except for cigarettes, measured as actual daily use, and 5+ drinks, measured as having five or more drinks in a row in the last two weeks.

Chapter 9

TRENDS IN DRUG USE AMONG COLLEGE STUDENTS AND THEIR NONCOLLEGE PEERS

In recent years college students and high school seniors showed simultaneous increases in marijuana use as well as in the index of any illicit drug use. This secular trend differed from prior trends in which drug use increases among college students either preceded or followed those among younger students. During the 1960–70s drug epidemic, illicit drug use increased dramatically among U.S. college students, then spread quickly to their non-college-attending peers and eventually down the age spectrum to high school and even middle school students. The diffusion process seemed to have reversed during the subsequent epidemic relapse in the 1990s, when drug use increased first among those in early adolescence and then radiated *up* the age spectrum as those cohorts grew older (reflecting a cohort effect). Use subsequently declined among adolescents; this decline, like the preceding increase, radiated up the age spectrum. In the past several years there has been some evidence of a more recent cohort effect emerging, with marijuana use first rising among high school seniors, particularly from 2009 through 2012 (followed by a leveling) and then rising among college students and their noncollege peers, particularly from 2011 through 2013 (with rather little leveling developing yet). See Figure 9-3a. Again, we define college students as *follow-up respondents (i.e., high school graduates) one to four years past high school who report that they were taking courses as full-time students in a two- or four-year undergraduate college at the beginning of March in the year in question.*

Trend data are also provided on the [noncollege] high school graduates who are also one to four years past high school but do not meet our definition of college students (Figures 9-1 through 9-16c).[1] This is an important comparison group for the college students and an important group by itself given much less is known about substance use among non-college-attending youth. Because the proportion of an age group in college declines steadily with the number of years beyond high school, this comparison group is slightly older on average than the college-enrolled group.

The proportion of young adult high school graduates one to four years beyond high school who attend college full-time has increased considerably since the MTF follow-ups began. In 2015, about 63% of the weighted number of follow-up respondents one to four years past high school met our definition of college students, compared with only 38% in the 1980 survey—the first survey to provide the full sampling of college students. This means, of course, that the proportion of our annual follow-up samples that is in the noncollege group of the same age has diminished.

The difference between the college group and the noncollege group provides an estimate of the degree to which college students' usage levels for various substances are above or below other high school graduates in this age band. Were we able to include the high school dropout segment in the calculations for the noncollege group, many of the differences with the college-enrolled would be accentuated.[2]

[1] Note that part-time college students are included in the "other" or noncollege group, given our definition of college students as full-time students.

[2] Panel analyses of samples from the high school classes of 1995–1997, followed for an eight-year period beginning when they were in 8th grade, clearly show that those who dropped out of high school had distinctly higher rates of substance use both before and after they left school. See

For each year, approximately 1,000–1,500 weighted respondents constitute the college student sample (see Table 9-7 for numbers [*N*s] per year) and roughly 700–1,700 respondents constitute the noncollege group one to four years beyond high school. Trend comparisons for these two groups are provided in this chapter. The reported results begin with 1980, the first year that enough follow-up surveys had accrued to characterize young people one to four years past high school. The 2015 survey is thus the 36th in the annual series on college students and non-college-attending youth 1 to 4 years out of high school.

Throughout much of the chapter, trends for the 12th-grade samples are included for comparison purposes. It is important to keep in mind that the total 12th-grade samples are shown and that there are substantial differences in rates of substance use *within* those samples between the college-bound and those who do not plan to complete four years of college. As shown extensively in *Volume I*[3] and in *Occasional Paper 86*,[4] 12th-grade students expecting to complete college are far less likely to smoke cigarettes and also less likely to use most other substances. So when considering figures that show higher rates of use among all 12th graders (regardless of college expectations) than among college students, it should not be concluded that usage declined after college entrance; the college-bound were already lower in usage rates than other 12th graders for almost all substances.

One additional point is relevant to interpreting differences over time for those attending college and those not attending college, both in terms of the differences between them and trends over time for either taken separately: the proportion of college students who are female has risen substantially since 1980. In 1980, females constituted about 50% of our college respondents, but by 2015 they constituted 63%. Females thus are a declining proportion of the noncollege group. As will be discussed below, we have charted the trends separately for male and female college students to permit an assessment of what effect these changing proportions may have on the overall rates observed for college students.

TRENDS IN PREVALENCE, 1980–2015: COLLEGE STUDENTS VERSUS THOSE NOT ENROLLED IN COLLEGE

- Among college students, the annual prevalence of using ***any illicit drug*** continued to rise gradually from 34% in 2006 to 41% in 2015 (Table 2 and Figure 9-1), driven primarily by an increase in marijuana use. Back during the first decade of MTF college student data, between 1980 and 1991, college student use of any illicit drug dropped fairly steadily—from 56% to 29%, a decrease of nearly half. After 1991, annual (and also 30-day) prevalence held fairly steady for a couple of years before beginning to rise, reaching 38% in 1998 and again in 2001—still well below the 1980 peak. Use among noncollege youth

Bachman, J. G., O'Malley, P. M., Schulenberg, J. E., Johnston, L. D., Freedman-Doan, P., & Messersmith, E. E. (2008). *The education–drug use connection: How successes and failures in school relate to adolescent smoking, drinking, drug use, and delinquency*. New York: Lawrence Erlbaum Associates/Taylor & Francis.

[3]Miech, R. A., Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2016). *Monitoring the Future national survey results on drug use, 1975-2015: Volume I, Secondary school students.* Ann Arbor: Institute for Social Research, The University of Michigan, 636 pp. Available at http://monitoringthefuture.org/pubs/monographs/mtf-vol1_2015.pdf

[4]Johnston, L. D., O'Malley, P. M., Miech, R. A., Bachman, J. G., & Schulenberg, J. E. (2016). *Demographic subgroup trends among adolescents in the use of various licit and illicit drugs 1975-2015* (Monitoring the Future Occasional Paper No. 86). Ann Arbor, MI: Institute for Social Research, University of Michigan, 552 pp. Available at http://monitoringthefuture.org/pubs/occpapers/mtf-occ86.pdf

moved similarly until 2000, when they exhibited a four-percentage-point increase due largely to their sharper increases in marijuana, amphetamine, and tranquilizer use. In recent years the noncollege rate has not differed much from the rate for college students; and in 2015 the two groups had the same annual prevalence at 41%. (We should mention that because of the diminishing sample sizes for the noncollege group, their estimates have become less stable in recent years, as is illustrated in Figure 9-1.) Twelfth-graders' use of any illicit drug showed a trajectory parallel to the other two groups in the decline phase of 1980 through 1991, but then followed with a much steeper increase through 1997, leaving their prevalence considerably above the two older groups. Their use leveled after 1998 and then declined some after 1999 (by about six percentage points), whereas among college students there was a continued increase through 2001, followed by a leveling as use among 12th graders continued to decline. As a result, all three groups had quite similar prevalence rates by 2007. After 2009, use increased among the high school seniors but did so somewhat later among the college students, creating some new divergence before they converged in 2013.

The divergence among the three groups and subsequent convergence of college students and high school seniors, at least, reflect cohort effects. After 2007 (2006 for college students), all three groups showed some increase in the annual prevalence of any illicit drug use—due largely to a turnaround in their use of marijuana, as described below—but the increase has been greater and longer from 2007 to 2011 among the 12th graders, compared to college students, likely once again giving rise to a cohort effect. Usage estimates for the noncollege segment have been rather unstable in recent years (see Figure 9-1), likely due to the smaller sample sizes that comprise that segment; but overall they show a rise in use since 2010.

- Figure 9-2 shows that since 1980, of the three groups the noncollege segment has usually had the highest levels of use of ***any illicit drug other than marijuana***. The exception was during most of the 1990s (the relapse phase in the epidemic), when use among 12th graders rose sharply and exceeded use in the noncollege segment. The noncollege group also showed an increase during that phase, though slightly lagged, and passed the 12th graders in the early 2000s.

 An increase in use of any illicit drug other than marijuana among college students also occurred after around 1994, but it lagged considerably behind the upturn among 12th graders, reflecting a cohort effect. From 1986 through 2009—a twenty-three-year interval—college students exhibited the lowest rates of use. In the earlier period from 1980 to 1994, use of any illicit drug other than marijuana declined appreciably among college students, with their annual prevalence dropping by nearly two thirds from 32% to 12% (Table 9-2). This generally paralleled the trends for the noncollege group and the 12th graders, indicating a secular trend during that period. All three groups showed some increase in use during the early 1990s; however, the rise in use of illicit drugs other than marijuana was again not as sharp among college students as it was in the other two groups, and it began two years later than among the 12th graders and one year later than among the noncollege group (Figure 9-2). This pattern is more consistent with a cohort effect.

After 1999, use among 12th graders leveled off, whereas the college students and noncollege segment showed a continuing increase. In fact, the college students and noncollege respondents continued to show an increase in their annual prevalence rate from 1998 through 2004, before declining from 2005 through 2007 among the noncollege group and through 2008 among the college students. From 2008 to 2012 the rate increased among the college students and declined steadily among those in the noncollege group, closing the considerable gap between the noncollege group and both college students and 12th graders. In 2012 all three groups had comparable annual prevalence rates at 17%–18%. In 2013 and again in 2014, college students and their noncollege peers showed increases in use while use among 12th graders remained unchanged in 2013 and declined in 2014. The increase in use of any illicit drug other than marijuana among college students, from 15% in 2008 to 21% in 2014, was significant (data now shown). *Thus by 2014 use by college students exceeded that by 12th graders, approached that of the noncollege segment, and reached a new recent peak rate. This increase appeared attributable mostly to college students' increased use of* ***amphetamines*** *(without a doctor's orders) and of* ***ecstasy.*** However, in 2015 all three groups showed a decline in their annual use of any illicit drug other than marijuana—the noncollege group declined by a significant 5.3 percentage points and the college students by a non-significant 2.4%. The net effect was to essentially eliminate the difference between those two groups; but their use remained above that of 12th graders. Declining use of ***MDMA*** (ecstasy, "Molly") occurred in all three groups in 2015 as did declining use of ***narcotics other than heroin*** (without prescription) and ***sedatives*** (without prescription).

Trends during the 1980s for most individual classes of illicit drugs tended to be similar among the three groups. During the 1990s there was more divergence, with college students usually showing later and lesser increases than 12th graders, and, for some drugs, less increase than their noncollege peers.

- Since 2000, the annual prevalence of ***marijuana*** use among college students reached a recent high point of 36% in 2001, declined to 30% by 2006, and has since climbed to a new recent peak of 38% by 2015 (Figure9-3a). The 3.5 percentage point increase in 2015, though substantial, did not quite reach statistical significance. In the noncollege group the increase since 2007 was more erratic, but in 2015 their annual prevalence reached 39%—also a new recent peak and just slightly above that of the college students. In an earlier period, from 1981 through 1991, annual prevalence of marijuana use dropped by nearly half from 51% to 27% among college students (Figure 9-3a). The noncollege group showed a comparable decline over the same time interval, as did the 12th graders; the annual prevalence rates for all three groups were fairly comparable across that interval, reflecting a secular trend. Use among 12th graders rose sharply after 1992, while use among college students and noncollege respondents rose more gradually. From 1991 through 1998, annual prevalence rose by 14 percentage points among 12th graders, compared to 10 percentage points among college students and 7 percentage points among the noncollege group. As a result, the 12th graders came to exhibit the highest rate of marijuana use in the last half of the 1990s, but they were the first to show a leveling off in marijuana use (in 1998), followed by the college students in 1999 and the noncollege group in 2002. All three groups had very similar rates of use by 2005 after some decline, particularly among the 12th graders.

The college students and high school seniors both showed some continuing decline in 2006, but they then both showed a gradual increase in their marijuana use from 2006 through 2011, with the sharpest increase occurring among the 12th graders, indicating in both cases the end of the gradual decline in marijuana use seen earlier in the decade.

- From 2007–2014, ***daily marijuana use*** among college students rose from 3.5% to 5.9%, which was the highest rate observed since 1980. In 2015 they showed a non-significant decline to 4.6%, and that was the year after 12th graders showed some decline in daily use. Daily marijuana use (Figure 9-3b) was consistently the highest among the noncollege stratum; it has risen sharply in that group since 2012, reaching 11.8% in 2015—a new high since 1980. College students have had the lowest rate of daily marijuana use throughout, with the single exception of 2014, when the college and 12th graders converged The differences have been greatest in periods of relatively high use and diminished considerably when use was at its nadir at the beginning of the 1990s. Daily marijuana use has varied widely in all three groups since 1980, when data on college students and their noncollege age peers were first available. The period from 1980 through 1992 saw a large proportional decline in daily use in all three groups, with rates falling by half or more. Since 1992, the rates have climbed substantially in all three groups, though there were periods of leveling: among high school seniors from 1999 through 2009, among college students from roughly 2003 through 2006, and among the noncollege group from 2003 through 2010. While daily use remained level among the 12th graders for several years after 2011, it continued to rise gradually among college students and more steeply among their noncollege peers.

- ***Synthetic marijuana*** (Figure 9-4) was first included in the study in 2011 and had an annual prevalence among college students of 8.5% at that time. Since then, use of this drug has dropped precipitously, reaching 0.9% in 2014, including a significant 1.4 percentage point decline between 2013 and 2014, followed by a small rebound in 2015. Use among the noncollege and 12th grade segments also have declined sharply since 2011, but still show higher rates than college students. In the past four years, the 12th graders have maintained the highest annual prevalence.

- Use of ***salvia***, another fairly recent arrival to the drug scene, was added to the MTF questionnaires in 2009. It has likewise seen a sharp decline in popularity among college students. Annual prevalence was 5.8% in 2009 but fell to 0.4% by 2015. (Annual prevalence is somewhat higher in the noncollege group in 2015, at 2.3% [Table 8-2], about where it was in 2014 [2.2%].)

- ***Bath salts—***containing cathinones, a synthetic stimulant—the use of which was first measured in 2012, have shown only trace levels of use among college students in the years since then (0.3% or less, and 0.1% in 2015).

- In recent years ***amphetamine*** use without medical supervision rose substantially among college students (Figure 9-12) from 2008 (5.7%) through 2012 (11.1%) but has not risen any further since (9.7% in 2015). The 1980s saw a dramatic decline of annual prevalence among college students, from 22% in 1981 to 4% in 1991. Proportionately, this was a larger

drop than that among 12th graders, who also showed a considerable decline, but fairly parallel to the overall change among the noncollege group. These large declines in all three groups suggest a secular trend in that period. Amphetamine use among college students and their noncollege peers began to increase in both groups during the relapse phase in the drug epidemic after 1992 and 1993, respectively, through 2001, with a leveling in 2002. Still, during the 1990s and early 2000s, the prevalence rates for amphetamine use in all three groups remained well below the rates observed in the early 1980s. Since 2002, there have been some divergence among the three groups, with amphetamine use among college students (who have consistently had the lowest rate of use since the mid-1980s) holding steady through 2008, while use among 12th graders and the noncollege group declined, nearly closing the gaps among them. In 2009, prevalence rates were similar for the college and noncollege groups (7.5% and 7.7%), and slightly lower among 12th graders (6.6%). *A sharp increase in amphetamine use among just the college students from 2008 through 2012, however, has placed them highest among the groups since 2010. In 2015 their annual prevalence for amphetamine use was 9.7%, up from 5.7% in 2008. It seems very likely that an increased interest in using these drugs to improve academic performance has contributed to this change among college students, and that the same practice may have spread down the age spectrum and accounts for the subsequent rise in use among 12th graders between 2009 and 2013*.[5] In 2015 ***Adderall*** was used by more than five times as many college students (10.7%) than was ***Ritalin*** (2.0%).

- Use of ***inhalants*** has been very low among both college and noncollege respondents since 1980, when rates were first measured (Figure 9-5), and it remained low in 2015 at 0.6% annual prevalence among college students (down from a peak of 4.1% in 1997) and noncollege respondents at 1.5% (down from a peak of 3.5% in 2006). Twelfth graders have consistently had considerably higher rates of inhalant use than either of these segments of the young adult population; and as is documented in *Volume I*, the 8th and 10th graders have had higher levels of use still. There has thus been a consistent age effect, with use of inhalants declining considerably with increasing age. All three groups have trended in parallel, with an increase in use from around 1981 through 1995, followed by a long decline thereafter. The increase and subsequent decline were substantially more pronounced among 12th graders, opening and then shrinking the gap between them and the two young adult groups.

- Annual prevalence of ***LSD*** remained fairly low among college students in 2015 (3.0%, Figure 9-7), compared with 4.6% in the noncollege group and 2.9% among 12th graders. During the early 1980s, one of the largest proportional declines observed among college students occurred with this drug: annual prevalence fell from 6.3% in 1982 to 2.2% in 1985. After 1989, use in all three groups increased, with the prevalence among college students reaching 6.9% by 1995. After 1995, use fell gradually among college students, their noncollege peers, and 12th graders until 2001, followed in 2002 by a particularly sharp decrease in all groups. As a result, there was a considerable convergence in usage rates,

[5] Data from high school seniors in 2012 on their reasons for using amphetamines showed "To help me study" was the most frequently chosen reason among 17 reasons, and was mentioned by 59% of the college-bound vs. by only 18% of those not college bound. Bachman, J.G., Johnston, L.D., & O'Malley, P.M. (2014). *Monitoring the Future: Questionnaire responses from the nation's high school seniors, 2012*. Institute for Social Research, The University of Michigan, Ann Arbor, Michigan.

which remained for some years. College students maintained lower levels of use than the other two groups for most of the life of the study until 2007. Use has risen some in all three groups since around 2007, but there has been little consistent difference among them. In general, the three groups have moved in parallel, suggesting a secular trend for this drug, at least through 2012; however, use has risen more among the noncollege group since 2012 (to 3.6% in 2015).

- Among college students the annual prevalence for ***hallucinogens other than LSD*** was 3.0% in 2015. Use of hallucinogens other than LSD (which primarily involves the use of psilocybin known as mushrooms or "shrooms") followed a track somewhat parallel to LSD use, at least up until about 2000 (Figure 9-8). Use declined in all three groups from the early 1980s through the early 1990s, followed by rising use during the 1990s and then some leveling. But the secular trends for these other hallucinogens diverged from those for LSD after about 2000, with an increase in their use, including among college students, just before and after the drop off in LSD use in 2002. While the use of LSD was higher than that of the other hallucinogens in the first two decades of the study, its use declined in the early 2000s; with the recent rise in LSD use and decline in other hallucinogen use, their annual prevalence rates are now about the same.

- The use of ***MDMA (ecstasy*** and, more recently, ***Molly***) by college students stood at 4.2% in 2015, up from 2.2% in 2007 (Figure 9-9), and annual prevalence for the noncollege group reached 5.8%. Use by college students and their noncollege peers began to rise after 1994 and their rates tracked closely through about 2000 (Figure 9-9). Questions about ecstasy use were added to the 12th-grade survey in 1996 and usage rates tracked similarly with those of the other two groups through about 2000. After 1997 there was a sharp increase in use in all three groups. The annual prevalence for college students, for example, rose from 2.4% in 1997 to 9.2% in 2001 and rose considerably more among the noncollege group. Use in all three groups declined sharply from 2001 to 2004, when annual rates were back to 2.2% for college students, 2.7% for 12th graders, and 4.0% for the noncollege segment. Both the college and noncollege groups showed some increase in use by 2012, after which use by college students began a decline while use in the noncollege group remained at the higher level. All three groups showed some decline in 2015. It is worth noting that "Molly"—which is a purer form of MDMA than ecstasy and has its own street name—was added as an example of MDMA in half of the questionnaires in 2014 and in all of them a year later. Figure 9-9 shows in 2014 the prevalence reported by respondents with and without Molly included. There is practically no difference in the level for the two older groups, but the 12th graders show a fair difference, with the inclusion of Molly leading to a higher prevalence. Even with Molly included, all three groups showed the decline in 2015. While none of these groups has usage rates comparable to the high rates from 2001, all three showed some resurgence in use in recent years, though over the past few years, use among 12th graders has fallen fairly sharply, followed by college students. In general, the patterns of change across time seem mostly to reflect a secular trend.

- Since data became available in 1980, college students have had the lowest rates of non-medical ***sedative*** (***barbiturate***) use among the three groups (Figure 9-13). At that early date, sedative (barbiturate) use was already quite low among college students (at 2.9%), but it

still fell by more than half to 1.3% by 1985. This proportional decline was sharper than among 12th graders and less sharp than among the noncollege respondents: both groups started at considerably higher levels of use than college students. Annual prevalence remained essentially unchanged between 1985 and 1993 for all three groups. A gradual increase in use occurred between 1994 and 2004 for college students and between 1993 and 2005 for the other two groups. After 2005, declines in use appeared in all three groups through 2011 (2013 for the noncollege stratum), before showing a rise in use for several years. In fact, among college students sedative (barbiturate) use had been rising from 1.7% in 2011 to 3.1% in 2014, before a non-significant decline in use in 2015. Indeed, all three groups showed some non-significant decline in use in 2015.

- Figure 9-14 shows that the annual prevalence of non-medical ***tranquilizer*** use among college students dropped by nearly three fourths in 1980–1994 from 6.9% to 1.8%—a period in which use declined in the other two groups as well. After this long period of decline, tranquilizer use by college students increased gradually, returning to 6.9% by 2003. Use by the noncollege segment and by 12th graders dropped more sharply from 1980 through 1992, eliminating the differences among the three groups. Use rose after 1992 for all, but the noncollege group showed the largest gain after 1999, again creating some differences. By 2002, tranquilizer use was once again at or near its recent high in all three groups. In 2003, however, the noncollege group and the 12th graders showed their first declines in recent years, thus narrowing the differences among the three groups. From 2004 through 2015, all three groups showed declines in use.

- The non-medical use of ***narcotics other than heroin***[6] (Figure 9-11a) rose considerably after about the mid-1990s for all three young adult groups. The overall trends in use have been quite parallel to those for sedatives (barbiturates) and tranquilizers. Prior to then, the use of narcotics other than heroin by college students was down to about half by 1994 from what it was in 1980 (2.4% in 1994 vs. 5.1% in 1980) as a result of a fairly gradual decline over that 14-year interval. This trend closely paralleled use among participants' noncollege counterparts and 12th graders. As with a number of other drugs, use among 12th graders began to rise after 1992, but use among college students did not begin to increase until after 1994, likely due to a cohort effect. In 2003, annual prevalence among college students reached a historic high point of 8.7% before leveling for three years. It then declined some from 8.8% in 2006 to 3.3% by 2015. Use among 12th graders leveled after reaching a historic high of 9.5% in 2004, but it then declined fairly steadily to 5.4% by 2015. The noncollege group emerged after 2000 as the most heavily using group for the first time, supplanting the high school seniors, as their use kept increasing through 2005, reaching an all-time high of 13%. After that, use in the noncollege group declined to 5.9% by 2015—close to the prevalence among college students—but remains the highest of the three groups. *It thus appears that all three groups have shown fairly steady and parallel declines in the use of these dangerous drugs since the early to mid-2000s, following a substantial increase in use by all three in the 1990s and into the early 2000s.*

[6]As discussed in Chapters 4 and 5, because the questions about narcotics other than heroin were changed in 2002, the prevalence figures are adjusted estimates. See the earlier discussion for details.

- Although data about non-medical use of the specific narcotic drugs, ***OxyContin*** and ***Vicodin,*** were not collected until 2002 (Figures 9-11b and 9-11c and Table 8-2), these drugs help to account for past differences between the college and noncollege segments in use of narcotics other than heroin. The noncollege group had annual prevalence rates up to twice that for college students in the use of both drugs when their use was first measured in 2002, but the comparisons among the three groups have changed since then.

 Annual prevalence of non-medical ***OxyContin*** use among college students rose fairly steadily, from 1.5% in 2002 to 5.0% in 2009, before dropping significantly to 1.5% in 2012, about where it remains in 2015 (Figure 9-11c). Use in the noncollege segment rose from 2002 (3.3%) to 2009 (6.2%); since then it has declined, and was at 4.3% in 2015. The trend line has been quite uneven, likely due to the limited numbers of cases in this segment. (Questions about OxyContin and Vicodin are in only three of the six questionnaire forms.) Among 12th graders, OxyContin use rose from 4.0% in 2002 to 5.1% in 2010 and then leveled for several years, before declining to 3.7% by 2015. It is clear that OxyContin use increased among college students between 2002 and 2009, closing the previously existing gap among the three groups; however, use has declined sharply among the college students since then, again opening a sizeable gap between them and the other two groups.

 Vicodin use without medical supervision (Figure 9-11b) showed a somewhat different pattern of change, with annual prevalence among all three groups remaining fairly level—and substantially higher than use of OxyContin—from 2002 through 2008, and then beginning to decline in the next year or two. As with OxyContin, the noncollege segment has consistently had higher Vicodin use than the college students. Twelfth-grade levels of Vicodin use have fallen in between. Because of the limited numbers of cases, the trends in use of Vicodin and OxyContin have generally been uneven in the young adult groups. Since roughly 2009, reported Vicodin use has declined fairly sharply in all three groups.

- Over recent years, the rates of ***cocaine*** use among college students, noncollege peers, and 12th graders (Figure 9-10) have declined to levels below those in the 1990s and far below those in the 1980s. The trend line for college students showed an increase in cocaine use in 2014 as annual prevalence among college students increased a significant 1.7 percentage points to 4.4%. In 2015 this higher level of cocaine use among college students held. Among the noncollege group there was a bump up in cocaine use which also has held for recent years. So cocaine use is no longer declining among these young adults, nor is it declining among 12th graders, who have the lowest prevalence of the three groups.

 The early to mid-1980s saw a level period of cocaine use with greater usage among college students and their noncollege peers than among 12th graders. It was followed by a dramatic drop in annual prevalence among college students (nearly nine tenths, from 17.1% in 1986 to 2.0% by 1994) and noncollege counterparts (from 18.9% in 1986 to 5.1% in 1994). A cohort effect emerged as cocaine use began to rise among 12th graders after 1992, among the college segment after 1994, and among the noncollege segment after 1995. Since 2000 the 12th graders and college students have had similar rates of use and parallel trends, while use in the noncollege stratum has been considerably higher. After around 2006 all three groups showed declines in use until 2012 among the noncollege group and 2013 among

college students, after which use rose for a year and then leveled. All three groups now have rates of cocaine use below those attained in the relapse phase of the illicit drug epidemic in the 1990s, with the noncollege group showing the greatest decline but still the highest level of use. These patterns of change suggest that a secular trend was underway through most of the 1980s, combined with a considerable age effect. After 1992 a cohort effect emerged through most of the 1990s, and since 2000 or so through 2012 a secular trend re-emerged with all three groups moving in parallel for the most part. After 2012 the three groups diverged.

- College students have shown some unique shifts in ***alcohol*** use. Despite different trend patterns among the three groups, college students have exhibited the highest levels and greatest constancy in ***occasions of heavy drinking*** since the first measurement in the MTF surveys in 1980 (Figure 9-15d). Occasions of heavy drinking are defined as having five or more drinks in a row at least once during the prior two weeks. Over the 35-year interval from 1980 through 2015, college students' rates of such drinking declined 12 percentage points (from 44% to 32%), while noncollege respondents' rates declined 15 percentage points (41% to 24%) and high school seniors' rates declined 24 percentage points (41% to 17%). (See Chapter 8 for discussion of recent trends in prevalence of extreme binge drinking among college and noncollege youth.)

 As can be seen in Figure 9-15d, both the noncollege segment and 12th graders showed fairly substantial declines in the prevalence of occasions of heavy drinking from 1981 through 1990. In contrast, college students showed no decline from 1981 to 1986 and then only a modest decline of five percentage points from 1986 through 1993. Between 1981 (when all three populations were very close in use) and 1992, this measure of heavy drinking dropped by 14 percentage points among 12th graders, by 11 percentage points among the noncollege respondents, but by only two percentage points among college students. After 1992, occasions of heavy drinking began to rise among 12th graders, while still declining some among college students—likely reflecting a cohort effect emerging during this period, similar to that observed for a number of illicit drugs—narrowing the gap somewhat. Drinking at that level subsequently began to increase among the noncollege segment after 1995, and by less among college students after 1996—modest increases that continued into 2001. Between 2001 and 2008, college students held fairly steady in their rates before showing some decline, while the noncollege segment held steady from roughly 2003 to 2007, followed by some decline and then a leveling. Meanwhile, among 12th graders, occasions of heavy drinking started a gradual decline after 1998 that continued into 2015, enlarging the difference between them and the other two groups. Once again there is evidence of cohort effects since the early 1990s, with the inflection points occurring later for the older strata. The college students and their noncollege counterparts both showed a sharper decline in 2015 than did the 12th graders; but the college students continue to have the highest level of binge drinking of the three groups.

 Why did college students' heavy drinking decline so little for a decade (1981–1991) compared to their noncollege peers and 12th graders? One possibility is that campuses provided some insulation from the effects of changes in the drinking age laws that took place in many states during that interval. Similarly, entrenched in many college campuses

is a culture of binge drinking that has proven impervious to many societal trends and intervention attempts.[7] Also, individuals who are under the legal drinking age in college are mixed in with peers who are of legal age to purchase alcohol; this was no longer true in high schools by the mid-1980s and was less true, perhaps, for many of those ages 19 to 22 who were not in college . Finally, much alcohol advertising and promotion was and is directed specifically at the college student population. Nevertheless, it appears that the continuing decline in heavy drinking among 12th graders is beginning to resonate among college students.

College students' ***daily drinking*** estimates (Figure 9-15c) leveled in recent years, standing at 3.1% in 2015. Earlier trends appeared a little less stable, perhaps due to smaller sample sizes at those times, going from around 6.5% in the early 1980s to a considerable decline from 1984 through 1995 (to 3.0%), followed by a period of some increase during and after the relapse phase in the drug epidemic in the 1990s, reaching 5.0% in 2002. Since 2002, daily drinking among college students has fluctuated at about 4% without a clear downward trend as has been seen among the 12th graders. Twelfth graders showed a somewhat similar pattern of daily drinking with a long period of decline, followed by an earlier reversal beginning in 1994. After 1998, 12th-grade daily drinking resumed its decline, reaching 2.1% by 2011 and leveling thereafter. Of the three groups, 12th graders have typically had the lowest rates of daily drinking. The noncollege respondents have generally had the highest rate of current daily drinking and have shown the most change in daily drinking trends. After a 2008 decline in daily use among noncollege respondents, daily drinking levels have been fairly comparable between the college students and their noncollege peers; and both of them showed some decline in daily use in 2015.

- The 30-day prevalence of ***cigarette smoking*** (Figure 9-16a) among college students has declined dramatically for the past decade and a half, falling by nearly two-thirds from a recent high of 31% in 1999 to 11% in 2015, and their *daily* smoking rate has fallen by more than two thirds over the same interval from 19% to 4% (Figure 9-16b). In the early 1980s, cigarette smoking among U.S. college students declined modestly. Thirty-day prevalence for college students fell from 26% to 22% between 1980 and 1984, remained fairly stable through 1990 (22%), then increased gradually but substantially, reaching 31% by 1999. In 2000 the first evidence of a new decline in smoking among college students began to appear, two years after smoking had begun to decline among 12th graders—this lag reflecting a cohort effect. The noncollege group, which has consistently had the highest smoking rate of the three groups, showed a fairly consistent decline from 1980 through 1990, an offsetting increase through 2001, and then a considerable decline since then. *Because the noncollege segment has shown a more moderate decline so far, their 30-day prevalence of smoking is now about twice that of the college students, and their prevalence of daily smoking is more than three times as high* (Figure 9-16b and Table 8-4).

 While smoking rates have consistently been lower among college students than the noncollege segment, the trend lines for these two groups converged some after 1984, as smoking rates more or less stabilized among college students but continued to decline

[7]Schulenberg, J. E., & Maggs, J. L. (2002). A developmental perspective on alcohol use and heavy drinking during adolescence and the transition to young adulthood. *Journal of Studies on Alcohol,* Supplement 14, 54–70.

among young adults not in college (Figure 9-16a). In fact, between 1989 and 1991, use began to rise among college students while continuing to decline among noncollege respondents. Both groups showed fairly parallel increases in smoking between about 1991 and 1999, after which use continued to increase among the noncollege segment but began to decline among college students, opening up a large difference between them. (Twelfth graders exhibited an increase from 1992 to 1997— peaking two to three years prior to the older groups—reflecting a cohort effect, and their use has declined significantly since then.) All three groups have seen very substantial declines since those peaks, and the rates for college students and 12th graders have largely converged, but use among the noncollege group remains far higher than the other two groups.

The popularity of Camel cigarettes among the college-bound may help to explain some of the narrowing of the gap between college students and their non-college-attending peers in the 1990s. The Joe Camel advertising and promotion campaign, which commenced in the late 1980s and ended in the late 1990s, may have succeeded in initiating more college and college-bound students (particularly males) to smoking than had been the case previously or since.

- For many prescription-type drugs—***amphetamines***, ***sedatives*** (***barbiturates***), and ***tranquilizers***—differences between college students and their noncollege peers narrowed over the years, particularly through the early 1990s. Much of this was due to general overall declines in usage rates during the 1980s, but may also reflect the increasing proportion of the age group going to college. After that, the differences between these two groups increased for sedatives (barbiturates) and tranquilizers as use in general increased.

- In sum, quite a number of drugs have been fading in popularity on American college campuses in recent years, and a similar pattern is found among youth who do not attend college. Two of the newer ***synthetic drugs***—***marijuana*** and ***salvia***—have shown steep declines in use. Other drugs are showing more gradual declines, including ***narcotic drugs other than heroin***, ***sedatives***, and ***tranquilizers***—all used non-medically—as well as ***inhalants, hallucinogens,*** and ***bath salts***. (Bath salts never really established a foothold on campuses or more generally among college age youth.) On the other hand, ***marijuana*** use increased from 2006 through 2015; and ***daily marijuana*** use grew since 2007, reaching the highest level seen in the past 35 years in 2014 (5.9%) before declining some in 2015. ***Amphetamine*** use grew fairly sharply on campuses between 2008 and 2012, and it then stabilized at high levels not seen since the mid-1980s. ***Ecstasy*** use has made somewhat of a rebound since the recent low observed among college students in 2007. ***Cocaine*** use among college students is well below the 1980s and 1990s rates, but the significant increase among college students in 2014 (and confirmed in 2015) suggests a need to watch this drug carefully in the future. The overall drug use trends among college students parallel the trends among 12th graders, though after the early 1990s they were generally lagged by a few years; still, declines in many drugs from 1980 to 1990 were proportionately larger among 19- to 22-year-olds (both college and noncollege) than among 12th graders. Despite parallel trends in the early 1990s, 12th graders showed larger, and usually earlier, increases in the use of a number of drugs in the years since; as indicated in *Volume I*, 8th and 10th graders showed increases a year earlier than 12th graders. *Clearly the upsurge, or what we*

have called a "relapse phase" in the illicit drug epidemic during the 1990s, did not originate on the nation's college campuses, as did the earlier epidemic. The relapse originated among secondary school students—and the younger ones at that—and was carried up the age spectrum through generational replacement. In other words, it exhibited a cohort effect.

GENDER DIFFERENCES IN TRENDS AMONG COLLEGE STUDENTS

As mentioned earlier, recent decades have seen a gradual rise in the proportion of college students who are female. Females constituted 50% of our 1980 sample of college students compared to 63% of our 2015 sample. Given that substantial gender differences exist in the use of some drugs, we have been concerned that apparent long-term trends in the levels of drug use among college students (and/or among the noncollege group) might actually be attributable to changes in the gender composition of that population. For this reason, in particular, we present separate trend lines for college males and females in the lower panels of Figures 9-1 through 9-16c. We do not focus on noncollege youth in these figures or this subsection in large part due to the limited numbers of cases for subgroups.

In general, college student trends in use of the various drugs have been highly parallel for men and women, as an examination of the relevant figures will show. The most noteworthy exceptions are mentioned below.

- Certain drug use measures showed a convergence between the genders as use rates declined to low levels in the early 1990s. This was true for the use of ***any illicit drug*** and ***any illicit drug other than marijuana***. Rates for male college students were consistently higher than those for female college students. After 1991 the genders diverged again. The convergence on any illicit drug use is due largely to a convergence for marijuana, discussed next.

- ***Marijuana*** use has been consistently higher among college males than among college females. There was some gender convergence in rates of marijuana use between 1980 and 1991 as overall use declined, and then some gender divergence between 1991 and 1999 as usage rates rose. After 2001, the two genders diverged further, with use among males remaining essentially unchanged through 2008 and use among females decreasing (Figure 9-3a). Since 2010, use among college males has remained fairly steady, whereas use among college females increased from 2010 through 2015—narrowing the gap considerably.

- ***Daily marijuana use*** (Figure 9-3b) has generally been about twice as high among college males as their female counterparts throughout the study; since the mid-1990s, such use has risen more among males, especially since 2007, opening a wide difference. In 2015, after a fair decline in daily use by males, the rates for college males and females, respectively, were 6.7% and 3.4%.

- From 1999 to 2005, ***LSD*** use dropped more steeply among males than among females, offsetting sizeable previous differences in which males had higher use and bringing the genders close together at very low prevalence rates (Figure 9-7). The small increases in use that have occurred since 2005 have been greater among males.

- Use of ***hallucinogens other than LSD*** has dropped for both genders since 2002 or 2003, with percentages for males generally twice as high or more as those for females (Figure 9-8).

- Rates of ***MDMA (ecstasy*** and, more recently, ***Molly***) use have been quite similar for male and female college students since measures were first introduced in 1989, and changes in their usage levels have tracked closely (Figure 9-9). Since 2007, college males have made more of a rebound in use; in 2015 annual prevalence was 3.7% for college females and 5.0% for college males. The alternated trend lines given for 2014 and 2015 show changes for the revised form of the question, which included Molly as an example of MDMA. It shows that there was a decline in male use in 2015, though not among females. The inclusion of Molly as an example appears to have increased the level of use reported by college males in 2014, but not among females.

- Trends in the non-medical use of ***narcotics other than heroin*** have generally moved in parallel for both male and female college students, with males generally higher, except during the nadir in use at the beginning of the 1990s when their rates were equivalent. (Figure 9-11a). Both genders have shown considerable declines in their use since about 2005 or 2006.

- After 1986, ***cocaine*** use, which had been substantially higher among males up until then, dropped more steeply for males than for females in general, and among male college students in particular, considerably narrowing the sizable gap between genders (Figure 9-10). Since 1991, both genders have moved in parallel, with males reporting slightly higher usage rates. Both genders showed small and non-significant upticks in use in 2014, which held or continued in 2015.

- Non-medical ***amphetamine*** use (Figure 9-12) also showed some convergence in the 1980s due to a greater decline among males; the two genders showed virtually equivalent rates from 1986 through 1998. Since 1998 males have had higher annual prevalence rates generally, and the divergence increased in the past two years. Perhaps this divergence is due to males being more likely to use amphetamines to try to enhance their academic performance.

- The gender differences for non-medical ***sedative*** (***barbiturate***) and ***tranquilizer*** use have been modest through most of the life of the study, with college males usually having slightly higher rates than their female counterparts. After 1995, a somewhat larger gap emerged for tranquilizers, again with males being higher. Tranquilizer use by college females peaked in 2003, briefly closing the gender gap, but use by males has consistently been slightly higher since then. Both genders have been showing declines in the use of both drugs since the early 2000s; however, sedatives, which no longer show a gender difference, have shown a slight rebound in use by both genders since 2011, though it did not continue into 2015 (Figures 9-13 and 9-14).

- Among college students, the *annual* prevalence of ***alcohol*** use has been virtually identical for the two genders since 1980, when use by college students and their noncollege peers

was first reported (Figure 9-15a). Both college males and females have shown a very gradual and modest decline over the past 34 years. Prior to 2000, *30-day* alcohol prevalence showed modest differences, with males slightly higher (Figure 9-15b); however, that difference largely disappeared by 2000. Since then, college males have had very slightly higher 30-day rates more years than not.

College males have consistently had considerably higher rates of *daily drinking* than college females (Figures 9-15c and 9-15d). But since about 2004 or 2005 the gender gap in daily drinking has been narrowing, with little change among college females but an overall decrease among college males.

- ***Binge drinking*** (having one or more occasions of having five or more drinks in a row in the prior two weeks) has shown a considerable gender gap, but a gradual long-term decline among college males since about 1985 that has reduced the gap (Figure 9-15d). As there has been less change among females, whose use has been consistently less than that of males, the gender gap has narrowed. (See Chapter 8 for consideration of extreme binge drinking prevalence and trends among college males and females.)

- For the interval between 1980 and 1988, the *30-day* prevalence of ***cigarette smoking*** was consistently higher among college females than males (Figure 9-16a). However, the gaps in 30-day prevalence narrowed because use by female college students declined considerably between 1980 and 1989, while use by male college students did not decline. After 1989, the gaps remained quite small and the genders reversed position, with college males catching up to and passing females in their rate of smoking by 1994 and then generally remaining higher thereafter. (A similar reversal had occurred among 12th graders a few years earlier, so the reversal among college students probably reflected a cohort effect.) Both genders exhibited a considerable decrease in 30-day smoking between 1999 and 2011, leaving only a modest difference between them (although the trend line for college males was irregular during this interval). In 2015 the 30-day prevalence rates were 16% and 9% for college males and females, respectively. *Daily smoking and half-pack-a-day smoking* (Figure 9-16b and c) also were higher among college females than among college males—this time up through 1994—after which the two genders have tracked rather closely. It thus appears that college males in recent years have been more likely than college females to smoke at a less than daily rate but about equally likely as females to smoke at more frequent rates.

 While the rise in smoking among college students was longer term and more gradual than among the noncollege group and 12th graders, it was nevertheless substantial, rising by nearly half between 1989 (21%) and 1999 (31%). This increase in smoking was sharper among college males than among college females, consistent with the notion that Camel cigarettes' promotion and advertising—which ended in the late 1990s—played a role in the overall increase. As we have reported elsewhere, Camels proved considerably more

popular among males, especially among those college-bound and from more educated families.[8]

[8]Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (1999). *Cigarette brand preferences among adolescents* (Monitoring the Future Occasional Paper No. 45). Ann Arbor, MI: Institute for Social Research. Available at: http://www.monitoringthefuture.org/pubs/occpapers/occ45.pdf.

TABLE 9-1
Trends in Lifetime Prevalence of Various Types of Drugs among College Students 1 to 4 Years beyond High School

(Entries are percentages.)

→ (Years cont.)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Approximate Weighted N =	*1,040*	*1,130*	*1,150*	*1,170*	*1,110*	*1,080*	*1,190*	*1,220*	*1,310*	*1,300*	*1,400*	*1,410*	*1,490*	*1,490*	*1,410*	*1,450*	*1,450*	*1,480*	*1,440*	*1,440*
Any Illicit Drug [a]	69.4	66.8	64.6	66.9	62.7	65.2	61.8	60.0	58.4	55.6	54.0	50.4	48.8	45.9	45.5	45.5	47.4	49.0	52.9	53.2
Any Illicit Drug other than Marijuana [a]	42.2	41.3	39.6	41.7	38.6	40.0	37.5	35.7	33.4	30.5	28.4	25.8	26.1	24.3	22.0	24.5	22.7	24.4	24.8	25.5
Marijuana	65.0	63.3	60.5	63.1	59.0	60.6	57.9	55.8	54.3	51.3	49.1	46.3	44.1	42.0	42.2	41.7	45.1	46.1	49.9	50.8
Inhalants [b]	10.2	8.8	10.6	11.0	10.4	10.6	11.0	13.2	12.6	15.0	13.9	14.4	14.2	14.8	12.0	13.8	11.4	12.4	12.8	12.4
Hallucinogens [c,x]	15.0	12.0	15.0	12.2	12.9	11.4	11.2	10.9	10.2	10.7	11.2	11.3	12.0	11.8	10.0	13.0	12.6	13.8	15.2	14.8
LSD [x]	10.3	8.5	11.5	8.8	9.4	7.4	7.7	8.0	7.5	7.8	9.1	9.6	10.6	10.6	9.2	11.5	10.8	11.7	13.1	12.7
Hallucinogens other than LSD [c,x]	11.6	9.0	10.6	8.3	9.2	8.1	7.8	6.8	6.2	6.2	6.0	6.0	5.7	5.4	4.4	6.5	6.5	7.5	8.7	8.8
Ecstasy (MDMA), original [d,z]	—	—	—	—	—	—	—	—	—	3.8	3.9	2.0	2.9	2.3	2.1	3.1	4.3	4.6	6.8	8.4
Ecstasy (MDMA), revised [d,z]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cocaine	22.0	21.5	22.4	23.1	21.7	22.9	23.3	20.6	15.8	14.6	11.4	9.4	7.9	6.3	5.0	5.5	5.0	5.6	8.1	8.4
Crack [e]	—	—	—	—	—	—	—	3.3	3.4	2.4	1.4	1.5	1.7	1.3	1.0	1.8	1.2	1.4	2.2	2.4
Other Cocaine [f]	—	—	—	—	—	—	—	18.1	14.2	16.0	10.2	9.0	7.6	6.3	4.6	5.2	4.6	5.0	7.4	7.8
Heroin	0.9	0.6	0.5	0.3	0.5	0.4	0.4	0.6	0.3	0.7	0.3	0.5	0.5	0.6	0.1	0.6	0.7	0.9	1.7	0.9
Narcotics other than Heroin [g,h]	8.9	8.3	8.1	8.4	8.9	6.3	8.8	7.6	6.3	7.6	6.8	7.3	7.3	6.2	5.1	7.2	5.7	8.2	8.7	8.7
Amphetamines [g,i]	29.5	29.4	30.1	27.8	27.8	25.4	22.3	19.8	17.7	14.6	13.2	13.0	10.5	10.1	9.2	10.7	9.5	10.6	10.6	11.9
Methamphetamine [j]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.1
Crystal Methamphetamine (Ice) [j]	—	—	—	—	—	—	—	—	—	—	1.0	1.3	0.6	1.6	1.3	1.0	0.8	1.6	2.2	2.8
Sedatives (Barbiturates) [g,t]	8.1	7.8	8.2	6.6	6.4	4.9	5.4	3.5	3.6	3.2	3.8	3.5	3.8	3.5	3.2	4.0	4.6	5.2	5.7	6.7
Sedatives, Adjusted [g,k]	13.7	14.2	14.1	12.2	10.8	9.3	8.0	6.1	4.7	4.1	—	—	—	—	—	—	—	—	—	—
Methaqualone [g]	10.3	10.4	11.1	9.2	9.0	7.2	5.8	4.1	2.2	2.4	—	—	—	—	—	—	—	—	—	—
Tranquilizers [g,l]	15.2	11.4	11.7	10.8	10.8	9.8	10.7	8.7	8.0	8.0	7.1	6.8	6.9	6.3	4.4	5.4	5.4	6.9	7.7	8.2
Alcohol [m]	94.3	95.2	95.2	95.0	94.2	95.3	94.9	94.1	94.9	93.7	93.1	93.6	91.8	89.3	88.2	88.5	88.4	87.3	88.5	88.0
Been Drunk [n]	—	—	—	—	—	—	—	—	—	—	—	79.6	76.8	76.4	74.4	76.6	76.2	77.0	76.8	75.1
Flavored Alcoholic Beverages [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cigarettes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Steroids [p]	—	—	—	—	—	—	—	—	—	0.4	1.5	1.4	1.7	1.9	0.5	0.8	0.6	1.6	0.9	1.3

(Table continued on next page.)

TABLE 9-1 (cont.)
Trends in Lifetime Prevalence of Various Types of Drugs among College Students 1 to 4 Years beyond High School

(Entries are percentages.)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Approximate Weighted N =	*1,350*	*1,340*	*1,260*	*1,270*	*1,400*	*1,360*	*1,280*	*1,250*	*1,270*	*1,320*	*1,260*	*1,230*	*1,150*	*1,090*	*1,030*	*1,020*	
Any Illicit Drug [a]	53.7	53.6	51.8	53.9	52.2	52.3	50.6	50.5	49.5	51.4	49.1	49.2	50.5	53.3	52.4	53.4	+1.0
Any Illicit Drug other than Marijuana [a]	25.8	26.3	26.9	27.6	28.0	26.5	26.3	25.3	22.6	25.6	24.8	24.3	23.8	28.3	29.0	26.4	-2.5
Marijuana	51.2	51.0	49.5	50.7	49.1	49.1	46.9	47.5	46.8	47.5	46.8	46.6	49.1	47.7	48.5	50.4	+1.9
Inhalants [b]	12.9	9.6	7.7	9.7	8.5	7.1	7.4	6.3	4.9	6.9	5.5	3.7	5.7	4.3	3.5	3.1	-0.4
Hallucinogens [c,x]	14.4	14.8	13.6	14.5	12.0	11.0	10.6	9.1	8.5	8.0	7.8	7.4	7.6	7.8	7.6	6.5	-1.1
LSD [x]	11.8	12.2	8.6	8.7	5.6	3.7	3.5	3.3	4.3	3.3	4.0	3.7	3.1	4.4	4.5	4.8	+0.3
Hallucinogens other than LSD [c,x]	8.2	10.7	11.0	12.8	10.1	10.6	10.1	8.5	8.2	7.8	7.1	6.9	7.2	6.8	6.8	5.1	-1.7
Ecstasy (MDMA), original [d,z]	13.1	14.7	12.7	12.9	10.2	8.3	6.9	5.4	6.2	6.5	6.2	6.8	8.7	8.1	8.2	—	—
Ecstasy (MDMA), revised [d,z]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.1	8.9	+0.7
Cocaine	9.1	8.6	8.2	9.2	9.5	8.8	7.7	8.5	7.2	8.1	6.6	5.5	5.2	5.1	6.2	6.1	-0.1
Crack [e]	2.5	2.0	1.9	3.1	2.0	1.7	2.3	1.3	1.4	1.0	1.2	0.8	0.7	0.7	1.4	0.5	-0.9
Other Cocaine [f]	8.1	8.3	8.6	8.5	9.3	8.1	6.2	8.0	7.1	7.9	6.7	5.4	5.1	5.2	6.2	6.4	+0.2
Heroin	1.7	1.2	1.0	1.0	0.9	0.5	0.7	0.5	0.7	0.8	0.7	0.6	0.5	0.4	0.3	0.2	-0.1
Narcotics other than Heroin [g,h]	8.9	11.0	12.2	14.2	13.8	14.4	14.6	14.1	12.4	14.0	12.2	12.4	10.3	10.8	9.9	6.6	-3.3 ss
Amphetamines [g,i]	12.3	12.4	11.9	12.3	12.7	12.3	10.7	11.2	9.1	11.8	12.1	13.4	14.4	16.1	15.0	13.9	-1.0
Methamphetamine [j]	5.1	5.3	5.0	5.8	5.2	4.1	2.9	1.9	1.9	1.0	1.1	0.6	0.3	0.9	0.7	0.8	+0.1
Crystal Methamphetamine (Ice) [j]	1.3	2.3	2.0	2.9	2.2	2.4	1.7	1.3	1.1	0.7	0.8	0.2	0.6	0.0	0.3	0.3	0.0
Sedatives (Barbiturates) [g,t]	6.9	6.0	5.9	5.7	7.2	8.5	6.3	5.9	6.4	6.0	5.3	3.6	3.5	5.4	5.9	4.4	-1.5
Sedatives, Adjusted [g,k]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Methaqualone [g]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tranquilizers [g,l]	8.8	9.7	10.7	11.0	10.6	11.9	10.0	9.1	8.6	9.2	8.1	7.1	6.4	7.8	6.9	7.8	+0.9
Alcohol [m]	86.6	86.1	86.0	86.2	84.6	86.6	84.7	83.1	85.3	82.6	82.3	80.5	81.0	78.0	79.4	81.4	+2.0
Been Drunk [n]	74.7	76.1	75.1	74.9	73.4	72.9	73.1	71.6	72.5	69.1	70.5	67.9	70.0	66.5	68.8	68.6	-0.3
Flavored Alcoholic Beverages [o]	—	—	—	—	79.0	84.5	80.9	80.6	78.6	78.1	77.4	76.7	76.6	67.5	72.7	74.8	+2.1
Cigarettes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Steroids [p]	0.6	1.5	1.2	1.2	1.6	1.0	1.9	0.6	1.6	1.3	0.7	1.1	0.4	0.8	0.9	0.6	-0.1

Source. The Monitoring the Future study, the University of Michigan.

See footnotes following Table 9-7.

TABLE 9-2
Trends in Annual Prevalence of Various Types of Drugs among College Students 1 to 4 Years beyond High School

(Entries are percentages.)

(Years cont.)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Approximate Weighted N =	*1,040*	*1,130*	*1,150*	*1,170*	*1,110*	*1,080*	*1,190*	*1,220*	*1,310*	*1,300*	*1,400*	*1,410*	*1,490*	*1,490*	*1,410*	*1,450*	*1,450*	*1,480*	*1,440*	*1,440*
Any Illicit Drug [a]	56.2	55.0	49.5	49.8	45.1	46.3	45.0	40.1	37.4	36.7	33.3	29.2	30.6	30.6	31.4	33.5	34.2	34.1	37.8	36.9
Any Illicit Drug other than Marijuana [a]	32.3	31.7	29.9	29.9	27.2	26.7	25.0	21.3	19.2	16.4	15.2	13.2	13.1	12.5	12.2	15.9	12.8	15.8	14.0	15.4
Synthetic Marijuana [u]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Marijuana	51.2	51.3	44.7	45.2	40.7	41.7	40.9	37.0	34.6	33.6	29.4	26.5	27.7	27.9	29.3	31.2	33.1	31.6	35.9	35.2
Inhalants [b]	3.0	2.5	2.5	2.8	2.4	3.1	3.9	3.7	4.1	3.7	3.9	3.5	3.1	3.8	3.0	3.9	3.6	4.1	3.0	3.2
Hallucinogens [c,x]	8.5	7.0	8.7	6.5	6.2	5.0	6.0	5.9	5.3	5.1	5.4	6.3	6.8	6.0	6.2	8.2	6.9	7.7	7.2	7.8
LSD [x]	6.0	4.6	6.3	4.3	3.7	2.2	3.9	4.0	3.6	3.4	4.3	5.1	5.7	5.1	5.2	6.9	5.2	5.0	4.4	5.4
Hallucinogens other than LSD [c,x]	5.2	4.7	5.4	3.9	4.1	3.9	3.8	3.1	3.4	3.1	3.0	3.1	2.6	2.7	2.8	4.0	4.1	4.9	4.4	4.5
Ecstasy (MDMA), original [d,z]	—	—	—	—	—	—	—	—	—	2.3	2.3	0.9	2.0	0.8	0.5	2.4	2.8	2.4	3.9	5.5
Ecstasy (MDMA), revised [d,z]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Salvia [v]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cocaine	16.8	16.0	17.2	17.3	16.3	17.3	17.1	13.7	10.0	8.2	5.6	3.6	3.0	2.7	2.0	3.6	2.9	3.4	4.6	4.6
Crack [e]	—	—	—	—	—	—	—	2.0	1.4	1.5	0.6	0.5	0.4	0.6	0.5	1.1	0.6	0.4	1.0	0.9
Other Cocaine [f]	—	—	—	—	—	—	—	10.7	10.6	9.3	5.1	3.2	2.4	2.5	1.8	3.3	2.3	3.0	4.2	4.2
Heroin	0.4	0.2	0.1	*	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.4	0.3	0.6	0.2
Narcotics other than Heroin [g,h]	5.1	4.3	3.8	3.8	3.8	2.4	4.0	3.1	3.1	3.2	2.9	2.7	2.7	2.5	2.4	3.8	3.1	4.2	4.2	4.3
OxyContin [g,j]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vicodin [g,j]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Amphetamines [g,i]	22.4	22.2	21.1	17.3	15.7	11.9	10.3	7.2	6.2	4.6	4.5	3.9	3.6	4.2	4.2	5.4	4.2	5.7	5.1	5.8
Ritalin [g,j]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Adderall [g,j]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Methamphetamine [j]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.3
Crystal Methamphetamine (Ice) [j]	—	—	—	—	—	—	—	—	—	—	0.1	0.1	0.2	0.7	0.8	1.1	0.4	0.8	1.0	0.5
Bath Salts (synthetic stimulants) [n]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sedatives (Barbiturates) [g,t]	2.9	2.8	3.2	2.2	1.9	1.3	2.0	1.2	1.1	1.0	1.4	1.2	1.4	1.5	1.2	2.0	2.3	3.0	2.5	3.2
Sedatives, Adjusted [g,k]	8.3	8.0	8.0	4.5	3.5	2.5	2.6	1.7	1.5	1.0	—	—	—	—	—	—	—	—	—	—
Methaqualone [g]	7.2	6.5	6.6	3.1	2.5	1.4	1.2	0.8	0.5	0.2	—	—	—	—	—	—	—	—	—	—
Tranquilizers [g,l]	6.9	4.8	4.7	4.6	3.5	3.6	4.4	3.8	3.1	2.6	3.0	2.4	2.9	2.4	1.8	2.9	2.8	3.8	3.9	3.8
Rohypnol [j]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
GHB [w]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ketamine [w]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Alcohol [m]	90.5	92.5	92.2	91.6	90.0	92.0	91.5	90.9	89.6	89.6	89.0	88.3	86.9	85.1	82.7	83.2	83.0	82.4	84.6	83.6
Been Drunk [n]	—	—	—	—	—	—	—	—	—	—	—	69.1	67.3	65.6	63.1	62.1	64.2	66.8	67.0	65.4
Flavored Alcoholic Beverages [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Alcoholic Beverages containing Caffeine [j,s]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cigarettes	36.2	37.6	34.3	36.1	33.2	35.0	35.3	38.0	36.6	34.2	35.5	35.6	37.3	38.8	37.6	39.3	41.4	43.6	44.3	44.5
Tobacco Using a Hookah [j]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Small Cigars [y]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Snus [j]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dissolvable Tobacco [j]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Steroids [p]	—	—	—	—	—	—	—	—	—	0.4	0.5	0.6	0.2	0.9	0.2	0.4	0.2	0.7	0.2	0.9

(Table continued on next page.)

TABLE 9-2 (cont.)
Trends in Annual Prevalence of Various Types of Drugs among College Students 1 to 4 Years beyond High School

(Entries are percentages.)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Approximate Weighted N =	*1,350*	*1,340*	*1,260*	*1,270*	*1,400*	*1,360*	*1,280*	*1,250*	*1,270*	*1,320*	*1,260*	*1,230*	*1,150*	*1,090*	*1,030*	*1,020*	
Any Illicit Drug [a]	36.1	37.9	37.0	36.5	36.2	36.6	33.9	35.0	35.2	36.0	35.0	36.3	37.3	40.5	38.6	41.4	+2.8
Any Illicit Drug other than Marijuana [a]	15.6	16.4	16.6	17.9	18.6	18.5	18.1	17.3	15.3	16.9	17.1	16.8	17.1	19.3	20.8	18.5	-2.4
Synthetic Marijuana [u]	—	—	—	—	—	—	—	—	—	—	—	8.5	5.3	2.3	0.9	1.5	+0.6
Marijuana	34.0	35.6	34.7	33.7	33.3	33.3	30.2	31.8	32.3	32.8	32.7	33.2	34.9	35.5	34.4	37.9	+3.5
Inhalants [b]	2.9	2.8	2.0	1.8	2.7	1.8	1.5	1.5	1.1	1.2	1.7	0.9	1.5	0.5	1.3	0.6	-0.7
Hallucinogens [c,x]	6.7	7.5	6.3	7.4	5.9	5.0	5.6	4.9	5.1	4.7	4.9	4.1	4.5	4.5	4.0	4.3	+0.3
LSD [x]	4.3	4.0	2.1	1.4	1.2	0.7	1.4	1.3	2.6	2.0	2.1	2.0	1.9	2.6	2.2	3.0	+0.8
Hallucinogens other than LSD [c,x]	4.4	5.5	5.8	7.1	5.6	5.0	5.4	4.7	4.4	4.1	4.4	3.4	3.9	3.7	3.2	3.0	-0.2
Ecstasy (MDMA), original [d,z]	9.1	9.2	6.8	4.4	2.2	2.9	2.6	2.2	3.7	3.1	4.3	4.2	5.8	5.3	5.0	—	—
Ecstasy (MDMA), revised [d,z]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.9	4.2	-0.7
Salvia [v]	—	—	—	—	—	—	—	—	—	5.8	3.5	3.1	1.5	1.0	1.1	0.4	-0.8
Cocaine	4.8	4.7	4.8	5.4	6.6	5.7	5.1	5.4	4.4	4.2	3.5	3.3	3.1	2.7	4.4	4.3	-0.2
Crack [e]	0.9	0.9	0.4	1.3	1.3	0.8	1.0	0.6	0.5	0.3	0.4	0.3	0.3	0.3	0.8	0.2	-0.5
Other Cocaine [f]	4.1	4.1	5.0	5.1	6.3	5.0	3.8	5.3	4.2	4.2	4.0	3.0	3.0	2.8	4.1	4.2	+0.1
Heroin	0.5	0.4	0.1	0.2	0.4	0.3	0.3	0.2	0.3	0.4	0.2	0.1	0.1	0.3	0.0	0.1	+0.1
Narcotics other than Heroin [g,h]	4.5	5.7	7.4	8.7	8.2	8.4	8.8	7.7	6.5	7.6	7.2	6.2	5.4	5.4	4.8	3.3	-1.6 ~
OxyContin [g,q]	—	—	1.5	2.2	2.5	2.1	3.0	2.8	3.6	5.0	2.3	2.4	1.2	2.3	1.3	1.5	+0.2
Vicodin [g,q]	—	—	6.9	7.5	7.4	9.6	7.6	6.7	6.7	8.4	4.9	5.8	3.8	4.4	2.8	1.6	-1.2
Amphetamines [g,i]	6.6	7.2	7.0	7.1	7.0	6.7	6.0	6.9	5.7	7.5	9.0	9.3	11.1	9.6	10.1	9.7	-0.4
Ritalin [g,q]	—	—	5.7	4.7	4.7	4.2	3.9	3.7	3.2	1.7	1.9	2.3	1.8	3.6	1.6	2.0	+0.3
Adderall [g,q]	—	—	—	—	—	—	—	—	—	10.2	9.0	9.8	9.0	10.7	9.6	10.7	+1.1
Methamphetamine [j]	1.6	2.4	1.2	2.6	2.9	1.7	1.2	0.4	0.5	0.3	0.4	0.2	0.0	0.4	0.1	0.5	+0.4
Crystal Methamphetamine (Ice) [j]	0.5	0.6	0.8	0.9	1.1	1.4	0.6	0.7	0.1	0.1	0.5	0.1	0.6	*	*	*	0.0
Bath Salts (synthetic stimulants) [n]	—	—	—	—	—	—	—	—	—	—	—	—	0.3	0.1	0.2	0.1	-0.1
Sedatives (Barbiturates) [g,t]	3.7	3.8	3.7	4.1	4.2	3.9	3.4	3.6	3.7	3.1	2.5	1.7	2.2	2.7	3.1	2.3	-0.8
Sedatives, Adjusted [g,k]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Methaqualone [g]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tranquilizers [g,l]	4.2	5.1	6.7	6.9	6.7	6.4	5.8	5.5	5.0	5.4	4.9	4.2	3.4	4.4	3.5	4.3	+0.8
Rohypnol [j]	—	—	0.7	0.4	0.3	0.1	0.2	0.1	0.3	*	—	—	—	—	—	—	—
GHB [w]	—	—	0.6	0.3	0.7	0.4	*	0.1	0.2	*	0.1	0.1	*	0.1	0.2	*	-0.2
Ketamine [w]	—	—	1.3	1.0	1.5	0.5	0.9	0.2	0.4	0.1	0.7	0.6	0.4	0.9	0.1	0.6	+0.5
Alcohol [m]	83.2	83.0	82.9	81.7	81.2	83.0	82.1	80.9	82.1	79.4	78.6	77.4	79.2	75.6	76.1	79.0	+2.9
Been Drunk [n]	64.7	68.8	66.0	64.7	67.1	64.2	66.2	64.8	66.8	61.5	63.8	60.1	61.5	57.9	60.5	61.6	+1.1
Flavored Alcoholic Beverages [o]	—	—	—	—	63.2	67.0	63.5	62.6	65.0	66.1	60.3	63.0	58.1	57.6	64.2	64.5	+0.3
Alcoholic Beverages containing Caffeine [j]	—	—	—	—	—	—	—	—	—	—	—	33.6	33.8	39.1	32.8	34.1	+1.4
Cigarettes	41.3	39.0	38.3	35.2	36.7	36.0	30.9	30.7	30.0	29.9	28.1	25.8	23.4	23.2	22.6	20.1	-2.5
Tobacco Using a Hookah [j]	—	—	—	—	—	—	—	—	—	—	—	27.9	25.7	26.1	32.7	23.4	-9.3 sss
Small Cigars [y]	—	—	—	—	—	—	—	—	—	—	—	23.6	20.3	19.0	24.2	19.6	-4.6
Snus [j]	—	—	—	—	—	—	—	—	—	—	—	6.5	4.7	4.8	5.0	5.8	+0.8
Dissolvable Tobacco [j]	—	—	—	—	—	—	—	—	—	—	—	*	0.3	0.2	0.5	1.1	+0.6
Steroids [p]	0.1	0.6	0.5	0.3	0.6	0.5	0.8	0.6	0.1	0.7	0.3	0.2	0.3	0.8	0.5	0.3	-0.2

Source. The Monitoring the Future study, the University of Michigan.

See footnotes following Table 9-7.

TABLE 9-3
Trends in 30-Day Prevalence of Various Types of Drugs among College Students 1 to 4 Years beyond High School

(Entries are percentages.)

(Years cont.)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Approximate Weighted N =	*1,040*	*1,130*	*1,150*	*1,170*	*1,110*	*1,080*	*1,190*	*1,220*	*1,310*	*1,300*	*1,400*	*1,410*	*1,490*	*1,490*	*1,410*	*1,450*	*1,450*	*1,480*	*1,440*	*1,440*
Any Illicit Drug [a]	38.4	37.6	31.3	29.3	27.0	26.1	25.9	22.4	18.5	18.2	15.2	15.2	16.1	15.1	16.0	19.1	17.6	19.2	19.7	21.6
Any Illicit Drug other than Marijuana [a]	20.7	18.6	17.1	13.9	13.8	11.8	11.6	8.8	8.5	6.9	4.4	4.3	4.6	5.4	4.6	6.3	4.5	6.8	6.1	6.4
Marijuana	34.0	33.2	26.8	26.2	23.0	23.6	22.3	20.3	16.8	16.3	14.0	14.1	14.6	14.2	15.1	18.6	17.5	17.7	18.6	20.7
Synthetic Marijuana [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Inhalants [b]	1.5	0.9	0.8	0.7	0.7	1.0	1.1	0.9	1.3	0.8	1.0	0.9	1.1	1.3	0.6	1.6	0.8	0.7	0.6	1.5
Hallucinogens [c,x]	2.7	2.3	2.6	1.8	1.8	1.3	2.2	2.0	1.7	2.3	1.4	1.2	2.3	2.5	2.1	3.3	1.9	2.1	2.1	2.0
LSD [x]	1.4	1.4	1.7	0.9	0.8	0.7	1.4	1.4	1.1	1.4	1.1	0.8	1.8	1.6	1.8	2.5	0.9	1.1	1.5	1.2
Hallucinogens other than LSD [c,x]	1.9	1.2	1.4	1.0	1.2	0.7	1.2	0.8	0.8	1.1	0.8	0.6	0.7	1.1	0.8	1.6	1.2	1.2	0.7	1.2
Ecstasy (MDMA), original [d,z]	—	—	—	—	—	—	—	—	—	0.3	0.6	0.2	0.4	0.3	0.2	0.7	0.7	0.8	0.8	2.1
Ecstasy (MDMA), revised [d,z]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cocaine	6.9	7.3	7.9	6.5	7.6	6.9	7.0	4.6	4.2	2.8	1.2	1.0	1.0	0.7	0.6	0.7	0.8	1.6	1.6	1.2
Crack [e]	—	—	—	—	—	—	1.3	0.4	0.5	0.2	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3
Other Cocaine [f]	—	—	—	—	—	—	—	3.5	3.2	3.2	1.0	1.0	0.9	0.6	0.3	0.8	0.6	1.3	1.5	1.0
Heroin	0.3	*	*	*	*	*	*	0.1	0.1	0.1	*	0.1	*	*	*	0.1	*	0.2	0.1	0.1
Narcotics other than Heroin [g,h]	1.8	1.1	0.9	1.1	1.4	0.7	0.6	0.8	0.8	0.7	0.5	0.6	1.0	0.7	0.4	1.2	0.7	1.3	1.1	1.0
Amphetamines [g,i]	13.4	12.3	9.9	7.0	5.5	4.2	3.7	2.3	1.8	1.3	1.4	1.0	1.1	1.5	1.5	2.2	0.9	2.1	1.7	2.3
Methamphetamine [j]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.2
Crystal Methamphetamine (Ice) [j]	—	—	—	—	—	—	—	—	—	—	*	*	*	0.3	0.5	0.3	0.1	0.2	0.3	*
Sedatives (Barbiturates) [g,t]	0.9	0.8	1.0	0.5	0.7	0.4	0.6	0.5	0.5	0.2	0.2	0.3	0.7	0.4	0.4	0.5	0.8	1.2	1.1	1.1
Sedatives, Adjusted [g,k]	3.8	3.4	2.5	1.1	1.0	0.7	0.6	0.6	0.6	0.2	—	—	—	—	—	—	—	—	—	—
Methaqualone [g]	3.1	3.0	1.9	0.7	0.5	0.3	0.1	0.2	0.1	0.0	—	—	—	—	—	—	—	—	—	—
Tranquilizers [g,l]	2.0	1.4	1.4	1.2	1.1	1.4	1.9	1.0	1.1	0.8	0.5	0.6	0.6	0.4	0.4	0.5	0.7	1.2	1.3	1.1
Alcohol [m]	81.8	81.9	82.8	80.3	79.1	80.3	79.7	78.4	77.0	76.2	74.5	74.7	71.4	70.1	67.8	67.5	67.0	65.8	68.1	69.6
Been Drunk [n]	—	—	—	—	—	—	—	—	—	—	—	45.0	45.0	43.8	42.8	37.9	40.3	46.4	44.3	44.6
Flavored Alcoholic Beverages [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cigarettes	25.8	25.9	24.4	24.7	21.5	22.4	22.4	24.0	22.6	21.1	21.5	23.2	23.5	24.5	23.5	26.8	27.9	28.3	30.0	30.6
Large Cigars [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Flavored Little Cigars [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Regular Little Cigars [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Steroids [p]	—	—	—	—	—	—	—	—	—	*	0.2	0.3	0.2	0.2	0.2	0.1	*	0.2	0.2	0.4

(Table continued on next page.)

TABLE 9-3 (cont.)
Trends in 30-Day Prevalence of Various Types of Drugs among College Students 1 to 4 Years beyond High School

(Entries are percentages.)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Approximate Weighted N =	*1,350*	*1,340*	*1,260*	*1,270*	*1,400*	*1,360*	*1,280*	*1,250*	*1,270*	*1,320*	*1,260*	*1,230*	*1,150*	*1,090*	*1,030*	*1,020*	
Any Illicit Drug [a]	21.5	21.9	21.5	21.4	21.2	19.5	19.2	19.3	18.9	20.7	19.2	21.4	22.3	22.8	22.7	23.4	+0.7
Any Illicit Drug other than Marijuana [a]	6.9	7.5	7.8	8.2	9.1	8.2	8.2	8.1	7.3	8.4	8.1	8.2	7.8	8.8	10.0	9.2	-0.9
Marijuana	20.0	20.2	19.7	19.3	18.9	17.1	16.7	16.8	17.0	18.5	17.5	19.4	20.5	20.6	20.8	21.1	+0.3
Synthetic Marijuana [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*	0.2	—
Inhalants [b]	0.9	0.4	0.7	0.4	0.4	0.3	0.4	0.1	0.4	0.1	0.5	0.3	0.2	0.1	0.3	0.2	-0.1
Hallucinogens [c,x]	1.4	1.8	1.2	1.8	1.3	1.2	0.9	1.3	1.7	1.0	1.4	1.2	1.1	1.0	1.0	1.4	+0.4
LSD [x]	0.9	1.0	0.2	0.2	0.2	0.1	0.3	0.3	0.8	0.3	0.7	0.5	0.4	0.4	0.5	0.7	+0.2
Hallucinogens other than LSD [c,x]	0.8	0.8	1.1	1.7	1.2	1.1	0.7	1.1	1.3	0.8	1.2	0.8	0.7	0.8	0.7	0.9	+0.2
Ecstasy (MDMA), original [d,z]	2.5	1.5	0.7	1.0	0.7	0.8	0.6	0.4	0.6	0.5	1.0	0.7	1.4	0.8	1.3	—	—
Ecstasy (MDMA), revised [d,z]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	0.7	-0.3
Cocaine	1.4	1.9	1.6	1.9	2.4	1.8	1.8	1.7	1.2	1.3	1.0	1.2	1.1	0.9	1.8	1.5	-0.4
Crack [e]	0.3	0.1	0.3	0.4	0.4	0.1	*	0.1	0.1	0.1	0.1	0.1	*	0.3	0.1	*	-0.1
Other Cocaine [f]	0.9	1.5	1.4	1.9	2.2	1.8	1.3	1.6	1.1	1.2	1.0	1.2	1.3	0.9	1.8	1.4	-0.4
Heroin	0.2	0.1	*	*	0.1	0.1	0.2	0.1	*	0.1	*	*	0.1	0.2	*	*	0.0
Narcotics other than Heroin [g,h]	1.7	1.7	3.2	2.3	3.0	3.1	3.1	2.2	2.3	2.7	2.3	2.1	2.2	1.5	1.2	1.3	+0.1
Amphetamines [g,i]	2.9	3.3	3.0	3.1	3.2	2.9	2.5	3.1	2.8	3.4	4.1	4.5	4.6	5.0	4.8	4.2	-0.6
Methamphetamine [j]	0.2	0.5	0.2	0.6	0.2	0.1	0.2	0.1	*	0.1	*	*	*	*	0.1	*	-0.1
Crystal Methamphetamine (Ice) [j]	*	0.1	*	0.3	0.1	0.2	*	0.1	*	*	0.2	*	0.3	*	*	*	0.0 ##
Sedatives (Barbiturates) [g,t]	1.1	1.5	1.7	1.7	1.5	1.3	1.3	1.4	1.4	1.2	0.6	0.8	0.8	0.9	0.7	1.0	+0.3
Sedatives, Adjusted [g,k]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Methaqualone [g]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tranquilizers [g,l]	2.0	1.5	3.0	2.8	2.7	2.2	2.1	1.8	1.6	2.2	1.3	1.6	1.1	1.2	1.7	1.6	-0.1
Alcohol [m]	67.4	67.0	68.9	66.2	67.7	67.9	65.4	66.6	69.0	65.8	65.0	63.5	67.7	63.1	63.1	63.2	+0.1
Been Drunk [n]	43.9	44.7	44.4	40.4	47.4	43.1	47.6	46.8	45.3	42.4	43.6	39.9	40.1	40.2	42.6	38.4	-4.2
Flavored Alcoholic Beverages [o]	—	—	—	—	34.0	30.9	26.2	27.5	35.8	32.3	31.5	29.5	31.3	29.1	32.9	30.5	-2.4
Cigarettes	28.2	25.7	26.7	22.5	24.3	23.8	19.2	19.9	17.9	17.9	16.4	15.2	12.5	14.0	12.9	11.3	-1.6
Large Cigars [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.4	4.9	—
Flavored Little Cigars [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.8	5.6	—
Regular Little Cigars [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.6	4.1	—
Steroids [p]	*	0.3	*	0.1	*	*	*	0.1	*	0.2	*	0.2	*	*	*	0.3	+0.3

Source. The Monitoring the Future study, the University of Michigan.

See footnotes following Table 9-7.

TABLE 9-4
Trends in 30-Day Prevalence of Daily [r] Use of Various Types of Drugs among College Students 1 to 4 Years beyond High School

(Entries are percentages.)

(Years cont.)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Approximate Weighted N =	*1,040*	*1,130*	*1,150*	*1,170*	*1,110*	*1,080*	*1,190*	*1,220*	*1,310*	*1,300*	*1,400*	*1,410*	*1,490*	*1,490*	*1,410*	*1,450*	*1,450*	*1,480*	*1,440*	*1,440*
Marijuana	7.2	5.6	4.2	3.8	3.6	3.1	2.1	2.3	1.8	2.6	1.7	1.8	1.6	1.9	1.8	3.7	2.8	3.7	4.0	4.0
Cocaine	0.2	*	0.3	0.1	0.4	0.1	0.1	0.1	0.1	*	*	*	*	*	0.1	*	*	*	*	*
Amphetamines [g]	0.5	0.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Amphetamines, Adjusted [g,i]	—	—	0.3	0.2	0.2	*	0.1	0.1	*	*	*	0.1	*	0.1	0.1	0.1	*	0.2	0.1	0.1
Alcohol [m]																				
Daily	6.5	5.5	6.1	6.1	6.6	5.0	4.6	6.0	4.9	4.0	3.8	4.1	3.7	3.9	3.7	3.0	3.2	4.5	3.9	4.5
Been Drunk [n]	—	—	—	—	—	—	—	—	—	—	—	0.5	0.2	0.3	0.8	0.5	0.1	1.3	0.8	1.0
5+ Drinks in a Row in Last 2 Weeks	43.9	43.6	44.0	43.1	45.4	44.6	45.0	42.8	43.2	41.7	41.0	42.8	41.4	40.2	40.2	38.6	38.3	40.7	38.9	40.0
Cigarettes																				
Daily	18.3	17.1	16.2	15.3	14.7	14.2	12.7	13.9	12.4	12.2	12.1	13.8	14.1	15.2	13.2	15.8	15.9	15.2	18.0	19.3
1/2 Pack+/Day	12.7	11.9	10.5	9.6	10.2	9.4	8.3	8.2	7.3	6.7	8.2	8.0	8.9	8.9	8.0	10.2	8.5	9.1	11.3	11.0

(Table continued on next page.)

TABLE 9-4 (cont.)
Trends in 30-Day Prevalence of Daily [r] Use of Various Types of Drugs among College Students 1 to 4 Years beyond High School

(Entries are percentages.)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Approximate Weighted N =	*1,350*	*1,340*	*1,260*	*1,270*	*1,400*	*1,360*	*1,280*	*1,250*	*1,270*	*1,320*	*1,260*	*1,230*	*1,150*	*1,090*	*1,030*	*1,020*	
Marijuana	4.6	4.5	4.1	4.7	4.5	4.0	4.3	3.5	3.9	4.9	4.4	4.7	4.8	5.1	5.9	4.6	-1.3
Cocaine	*	*	*	*	*	0.1	0.1	*	*	*	*	*	*	*	*	*	0.0
Amphetamines [g]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Amphetamines, Adjusted [g,i]	0.1	0.2	0.1	0.3	0.2	0.2	0.4	0.1	0.2	0.1	*	0.2	0.1	*	0.2	0.1	-0.1
Alcohol [m]																	
Daily	3.6	4.7	5.0	4.3	3.7	4.6	4.8	4.3	4.0	4.3	3.6	3.8	3.9	3.6	4.3	3.1	-1.2
Been Drunk [n]	0.7	0.5	0.8	1.1	0.8	0.5	0.6	0.7	0.5	0.7	0.3	1.3	0.4	0.5	0.4	0.7	+0.3
5+ Drinks in a Row in Last 2 Weeks	39.3	40.9	40.1	38.5	41.7	40.1	40.2	41.1	40.0	36.9	37.0	36.1	37.4	35.2	35.4	31.9	-3.6
Cigarettes																	
Daily	17.8	15.0	15.9	13.8	13.8	12.4	9.2	9.3	9.2	8.0	7.6	7.3	5.2	5.6	5.2	4.2	-1.0
1/2 Pack+/Day	10.1	7.8	7.9	7.6	6.8	6.7	4.9	4.3	4.3	3.8	3.9	2.5	2.4	2.4	2.4	1.4	-1.1

Source. The Monitoring the Future study, the University of Michigan.

See footnotes following Table 9-7.

TABLE 9-5
Trends in Having 10+ Drinks in a Row in the Last Two Weeks: Full-Time College Students vs. Others among Respondents 1 to 4 Years beyond High School by Gender

(Entries are percentages.)

Total	2005-2010	2011-2015	Change
Full-Time College	13.4	11.2	-2.2
Weighted N	*1304*	*922*	
Others	12.4	10.4	-2.0
Weighted N	*761*	*552*	
Males			
Full-Time College	23.8	18.3	-5.5
Weighted N	*509*	*350*	
Others	19.0	16.6	-2.4
Weighted N	*323*	*249*	
Females			
Full-Time College	6.8	6.9	+0.1
Weighted N	*795*	*572*	
Others	7.5	5.3	-2.2
Weighted N	*438*	*303*	

Source. The Monitoring the Future study, the University of Michigan.

Notes. ' * ' indicates a prevalence rate of less than 0.05%.

See footnotes following Table 9-7.

TABLE 9-6
Trends in Having 15+ Drinks in a Row in the Last Two Weeks: Full-Time College Students vs. Others among Respondents 1 to 4 Years beyond High School by Gender

(Entries are percentages.)

Total	2005-2010	2011-2015	Change
Full-Time College	5.0	4.0	-1.0
Weighted N	*1302*	*922*	
Others	5.3	5.3	0.0
Weighted N	*763*	*552*	
Males			
Full-Time College	10.0	7.8	-2.2
Weighted N	*509*	*350*	
Others	9.7	9.0	-0.7
Weighted N	*323*	*249*	
Females			
Full-Time College	1.7	1.7	0.0
Weighted N	*794*	*572*	
Others	2.1	2.2	+0.1
Weighted N	*440*	*303*	

Source. The Monitoring the Future study, the University of Michigan.

Notes. ' * ' indicates a prevalence rate of less than 0.05%.

See footnotes following Table 9-7.

TABLE 9-7
Trends in Lifetime, Annual, and 30-Day Prevalence of an Illicit Drug Use Index [a] among College Students 1 to 4 Years beyond High School, by Gender

(Years cont.) →

	1980 [i]	1981 [i]	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Percentage who used in lifetime																			
Any Illicit Drug																			
Total	69.4	66.8	64.6	66.9	62.7	65.2	61.8	60.0	58.4	55.6	54.0	50.4	48.8	45.9	45.5	45.5	47.4	49.0	52.9
Males	71.0	67.5	68.1	71.3	66.4	69.8	64.7	63.5	56.0	56.5	52.5	51.3	50.8	45.7	49.5	47.3	50.3	52.1	54.4
Females	67.5	66.3	61.5	63.0	59.2	61.6	59.4	57.4	60.2	54.9	55.1	49.7	47.1	46.0	42.6	44.3	45.6	46.7	52.0
Any Illicit Drug other than Marijuana																			
Total	42.2	41.3	39.6	41.7	38.6	40.0	37.5	35.7	33.4	30.5	28.4	25.8	26.1	24.3	22.0	24.5	22.7	24.4	24.8
Males	42.8	39.8	45.1	44.6	40.9	42.1	38.2	37.2	31.8	30.6	26.2	27.6	26.3	24.3	24.6	26.6	25.0	27.3	27.3
Females	41.6	42.6	34.7	39.2	36.4	38.3	37.0	34.6	34.6	30.4	30.1	24.3	26.1	24.3	20.1	22.9	21.2	22.2	23.3
Percentage who used in last 12 months																			
Any Illicit Drug																			
Total	56.2	55.0	49.5	49.8	45.1	46.3	45.0	40.1	37.4	36.7	33.3	29.2	30.6	30.6	31.4	33.5	34.2	34.1	37.8
Males	58.9	56.2	54.6	53.4	48.4	50.9	49.8	43.3	37.0	38.2	34.2	30.2	32.8	32.6	33.9	36.1	36.6	38.3	40.1
Females	53.3	54.0	44.9	46.7	41.9	42.7	41.1	37.7	37.6	35.4	32.5	28.4	28.7	29.1	29.5	31.7	32.7	31.1	36.4
Any Illicit Drug other than Marijuana																			
Total	32.3	31.7	29.9	29.9	27.2	26.7	25.0	21.3	19.2	16.4	15.2	13.2	13.1	12.5	12.2	15.9	12.8	15.8	14.0
Males	33.7	32.8	33.4	33.5	29.2	29.7	28.6	23.5	19.4	18.7	15.7	14.4	13.8	15.0	14.9	19.5	15.1	18.1	17.0
Females	31.1	30.8	26.9	26.8	25.2	24.4	22.1	19.6	19.0	14.6	14.8	12.1	12.6	10.5	10.2	13.3	11.3	14.1	12.1
Percentage who used in last 30 days																			
Any Illicit Drug																			
Total	38.4	37.6	31.3	29.3	27.0	26.1	25.9	22.4	18.5	18.2	15.2	15.2	16.1	15.1	16.0	19.1	17.6	19.2	19.7
Males	42.9	40.6	37.7	33.8	30.4	29.9	31.0	24.0	18.8	20.0	18.2	16.0	18.0	16.0	20.5	23.7	20.6	23.4	23.1
Females	34.0	34.8	25.6	25.5	23.7	23.2	21.7	21.1	18.3	16.7	12.7	14.6	14.5	14.5	12.7	15.7	15.8	16.2	17.6
Any Illicit Drug other than Marijuana																			
Total	20.7	18.6	17.1	13.9	13.8	11.8	11.6	8.8	8.5	6.9	4.4	4.3	4.6	5.4	4.6	6.3	4.5	6.8	6.1
Males	22.8	18.6	20.2	16.0	16.1	12.6	14.4	9.0	8.2	8.0	4.9	4.8	5.1	7.3	6.2	8.8	6.1	7.8	8.6
Females	18.7	18.5	14.2	12.1	11.5	11.2	9.3	8.5	8.8	6.0	4.0	3.9	4.2	3.8	3.4	4.5	3.4	6.1	4.6
Approximate Weighted N																			
All Respondents																			
Total	*1,040*	*1,130*	*1,150*	*1,170*	*1,110*	*1,080*	*1,190*	*1,220*	*1,310*	*1,300*	*1,400*	*1,410*	*1,490*	*1,490*	*1,410*	*1,450*	*1,450*	*1,480*	*1,440*
Males	*520*	*530*	*550*	*550*	*540*	*490*	*540*	*520*	*560*	*580*	*620*	*640*	*680*	*660*	*590*	*610*	*560*	*630*	*570*
Females	*520*	*600*	*610*	*620*	*570*	*600*	*650*	*700*	*750*	*720*	*780*	*770*	*810*	*830*	*820*	*840*	*890*	*860*	*880*

(Table continued on next page.)

TABLE 9-7 (cont.)
Trends in Lifetime, Annual, and 30-Day Prevalence of an Illicit Drug Use Index [a]
among College Students 1 to 4 Years beyond High School, by Gender

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2014–2015 change
Any Illicit Drug																		
Total	53.2	53.7	53.6	51.8	53.9	52.2	52.3	50.6	50.5	49.5	51.4	49.1	49.2	50.5	53.3	52.4	53.4	+1.0
Males	58.4	54.4	53.9	54.3	54.1	54.9	54.2	55.0	52.3	50.7	53.2	53.5	52.3	52.4	53.7	54.5	55.1	+0.6
Females	49.6	53.2	53.5	50.2	53.7	50.6	51.3	47.8	49.4	48.8	50.2	46.2	47.3	49.2	53.0	50.9	52.5	+1.6
Any Illicit Drug other than Marijuana																		
Total	25.5	25.8	26.3	26.9	27.6	28.0	26.5	26.3	25.3	22.6	25.6	24.8	24.3	23.8	28.3	29.0	26.4	-2.5
Males	29.4	28.9	27.0	30.4	27.6	31.1	29.0	29.2	26.5	25.2	29.9	27.8	27.8	26.0	30.4	29.8	31.0	+1.2
Females	22.8	23.5	25.9	24.6	27.5	26.2	25.1	24.4	24.6	21.0	22.7	22.8	22.1	22.2	26.8	28.3	23.8	-4.6
Any Illicit Drug																		
Total	36.9	36.1	37.9	37.0	36.5	36.2	36.6	33.9	35.0	35.2	36.0	35.0	36.3	37.3	40.5	38.6	41.4	+2.8
Males	42.5	38.0	38.8	39.5	39.2	40.9	40.7	39.2	38.0	38.7	37.6	40.3	41.2	39.5	41.3	39.2	45.2	+6.0
Females	33.2	34.7	37.3	35.4	34.8	33.4	34.2	30.6	33.1	32.9	35.0	31.6	33.2	35.7	40.0	38.2	39.2	+1.0
Any Illicit Drug other than Marijuana																		
Total	15.4	15.6	16.4	16.6	17.9	18.6	18.5	18.1	17.3	15.3	16.9	17.1	16.8	17.1	19.3	20.8	18.5	-2.4
Males	19.0	18.6	17.2	19.2	19.3	22.1	21.1	22.6	19.0	17.8	19.7	20.3	20.1	19.6	22.0	21.8	24.6	+2.8
Females	12.8	13.5	15.8	15.0	17.1	16.5	16.9	15.2	16.3	13.7	15.0	15.1	14.7	15.4	17.4	20.1	14.9	-5.2 s
Any Illicit Drug																		
Total	21.6	21.5	21.9	21.5	21.4	21.2	19.5	19.2	19.3	18.9	20.7	19.2	21.4	22.3	22.8	22.7	23.4	+0.7
Males	26.7	24.0	25.0	25.1	22.8	26.1	22.9	23.4	22.7	23.1	23.4	25.9	27.0	27.0	27.8	25.9	27.4	+1.4
Females	18.1	19.6	19.8	19.3	20.5	18.4	17.5	16.6	17.1	16.2	19.0	15.0	17.9	19.1	19.3	20.2	21.1	+0.8
Any Illicit Drug other than Marijuana																		
Total	6.4	6.9	7.5	7.8	8.2		8.2	8.2	8.1	7.3	8.4	8.1	8.2	7.8	8.8	10.0	9.2	-0.9
Males	7.5	8.2	9.0	8.4	8.1	11.3	10.3	10.3	9.5	9.6	9.0	10.4	10.6	9.2	11.2	12.4	12.9	+0.5
Females	5.6	6.0	6.4	7.4	8.3	7.8	7.0	6.9	7.2	5.8	8.0	6.7	6.7	6.8	7.2	8.3	7.1	-1.2
All Respondents																		
Total	*1,440*	*1,350*	*1,340*	*1,260*	*1,270*	*1,400*	*1,360*	*1,280*	*1,250*	*1,270*	*1,320*	*1,260*	*1,230*	*1,150*	*1,090*	*1,030*	*1,020*	
Males	*590*	*560*	*540*	*490*	*480*	*520*	*500*	*500*	*470*	*510*	*530*	*500*	*480*	*480*	*430*	*440*	*380*	
Females	*850*	*790*	*800*	*770*	*790*	*880*	*860*	*780*	*770*	*760*	*790*	*760*	*750*	*670*	*660*	*590*	*640*	

Source. The Monitoring the Future study, the University of Michigan.

See footnotes on the following page.

Footnotes for Tables 9-1 through 9-7

Notes. Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding. ' — ' indicates data not available. ' * ' indicates a prevalence rate of less than 0.05%.

[a]Any illicit drug includes use of marijuana, hallucinogens, cocaine, heroin or other narcotics, amphetamines, sedatives (barbiturates), methaqualone (until 1990), or tranquilizers not under a doctor's orders.

[b]This drug was asked about in four of the five questionnaire forms in 1980–1989, in five of the six forms in 1990–1998, and in three of the six forms in 1999–2015. Total *N* in 2015 is approximately 510.

[c]In 2001 the question text was changed on three of the six questionnaire forms. Other psychedelics was changed to other hallucinogens, and shrooms was added to the list of examples. Beginning in 2002 the remaining forms were changed to the new wording.

[d]This drug was asked about in two of the five questionnaire forms in 1989, in two of the six questionnaire forms in 1990–2001, in three of the six questionnaire forms in 2002–2015, and in four of six questionnaire forms beginning in 2015. Total N in 2015 is approximately 680.

[e]This drug was asked about in one of the five questionnaire forms for annual use only in 1986, two of the five questionnaire forms in 1987–1989, in all six questionnaire forms in 1990–2001, and in five of the six questionnaire forms in 2002–2015. Total *N* in 2015 is approximately 850.

[f]This drug was asked about in one of the five questionnaire forms in 1987–1989 and in four of six questionnaire forms in 1990–2015. Total *N* in 2015 is approximately 680.

[g]Only drug use that was not under a doctor's orders is included here.

[h]In 2002 the question text was changed on three of the six questionnaire forms. The list of examples of narcotics other than heroin was updated: Talwin, laudanum, and paregoric—all of which had negligible rates of use by 2001—were replaced by Vicodin, OxyContin, and Percocet. The 2002 data presented here are based on the changed forms only; *N* is three sixths of *N* indicated. In 2003 the remaining forms were changed to the new wording. The data are based on all forms in 2003 and beyond.

[i]Revised questions about amphetamine use were introduced in 1982 to more completely exclude inappropriate reporting of nonprescription amphetamines. In 2013 the question wording was changed slightly in thee of the six questionnaire forms. 2013 data are based on the changed forms only; N is one half of N indicated.

[j]This drug was asked about in two of the six questionnaire forms. Total *N* in 2015 is approximately 340. Questions about Rohypnol use were dropped from the questionnaires beginning in 2010.

[k]Sedatives, adjusted data are a combination of barbiturate and methaqualone data.

[l]In 2001 the question text was changed on three of the six questionnaire forms. Miltown was replaced with Xanax in the list of examples. Beginning in 2002 the remaining forms were changed to the new wording.

[m]In 1993 and 1994, the question text was changed slightly in three of the six questionnaire forms to indicate that a drink meant more than just a few sips. Because this revision resulted in rather little change in reported prevalence in the surveys of high school graduates, the data for all forms combined are used in order to provide the most reliable estimate of change. After 1994 the new question text was used in all six of the questionnaire forms.

[n]This drug was asked about in three of the six questionnaire forms. Total *N* in 2015 is approximately 510.

[o]This drug was asked about in one of the six questionnaire forms. Total *N* in 2015 is approximately 170.

[p]This drug was asked about in one of the five questionnaire forms in 1989 and in two of the six questionnaire forms in 1990–2015. Total *N* in 2015 is approximately 340.

[q]This drug was asked about in two of the six questionnaire forms through 2010 and in three of the six questionnaire forms beginning in 2011. Total *N* in 2015 is approximately 510.

[r]Daily use is defined as use on 20 or more occasions in the past 30 days except for cigarettes, measured as actual daily use, and 5+ drinks, measured as having five or more drinks in a row in the last two weeks.

[s]In 2012 the alcoholic beverage containing caffeine question text was changed to alcoholic beverage mixed with an energy drink. The data in 2011 and 2012 are not comparable due to this question change.

[t]In 2013 the question text was changed on all forms: Tuinal, Nembutal, and Seconal were replaced with Ambien, Lunesta, and Sonata. The data in 2012 and 2013 are not comparable due to this question change.

[u]This drug was asked about in two of the six questionnaire forms in 2011-2012; N is two sixths of N indicated. Data were based on three of the six questionaire forms beginning in 2013; N is three sixths of N indicated.

[v]This drug was asked about in one of the six questionnaire forms in 2009; N is one sixth of N indicated; Data were based on two of the six questionnaire forms in 2010-2011; N is two sixths of N indicated. Data were based on three of the six questionnaire forms beginning in 2012; N is three sixths of N indicated.

[w]This drug was asked about in two of the six questionnaire forms in 2002-2009; N is two sixths of N indicated; Data were based on three of the six questionnaire forms in 2010-2011; N is three sixths of N indicated. Data were based on two of the six questionnaire forms in 2012-2015; N is two sixths of N indicated.

[x]This drug was asked about in all six questionaire forms from 1980-2013. Data based on five of six forms beginning in 2014; N is five sixths of N indicated.

[y]This drug asked about in three of six questionnaire forms from 2011-2013; N is one half of N indicated. Beginning in 2014, data based on two of six questionnaire forms; N is two sixths of N indicated.

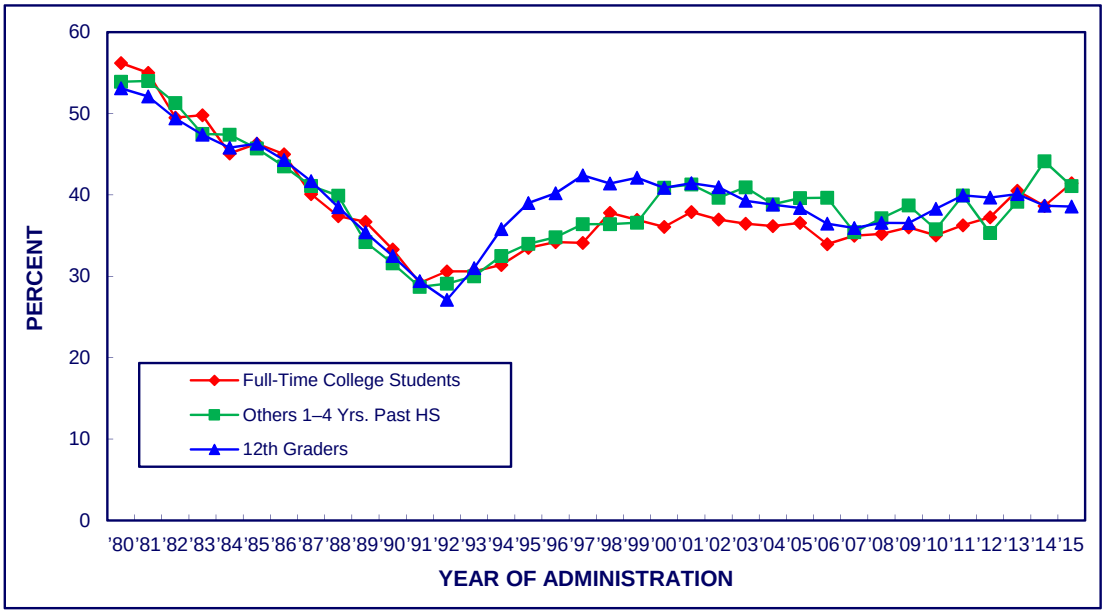
[z]In 2014 a revised question on use of ecstasy (MDMA) including "Molly" was added to one form at each level. The 2013 and 2014 "Original wording" data reported here are for only the questionnaires using the original question wording. The 2014 and 2015 "Revised wording" data reported here are for only the questionnaires using the version which includes "Molly."

FIGURE 9-1

ANY ILLICIT DRUG

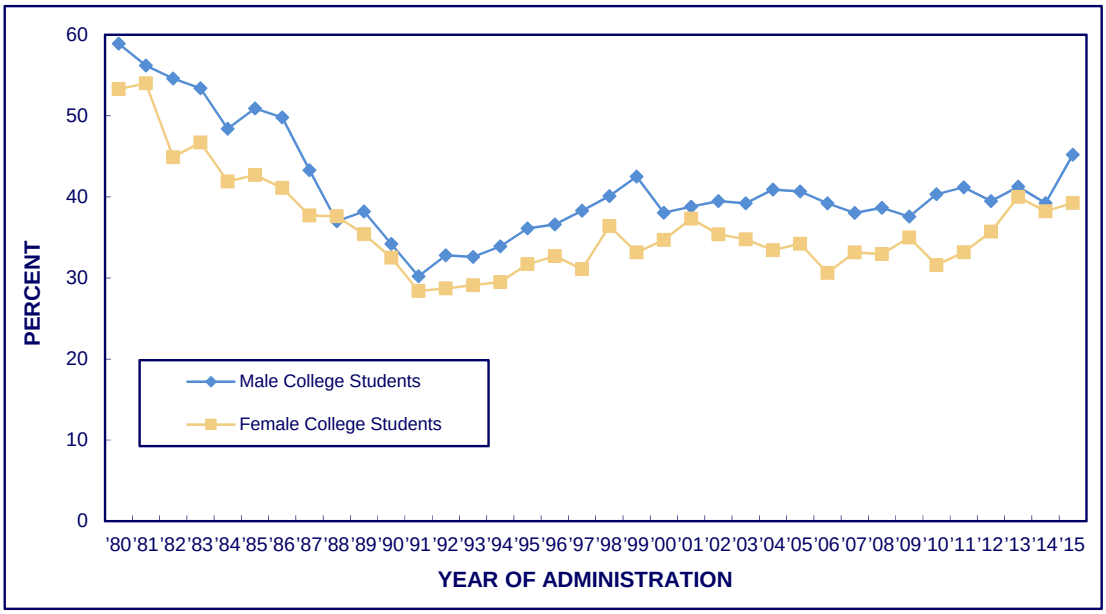
Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



ANY ILLICIT DRUG

Trends in Annual Prevalence among Male vs. Female College Students



Source. The Monitoring the Future study, the University of Michigan.

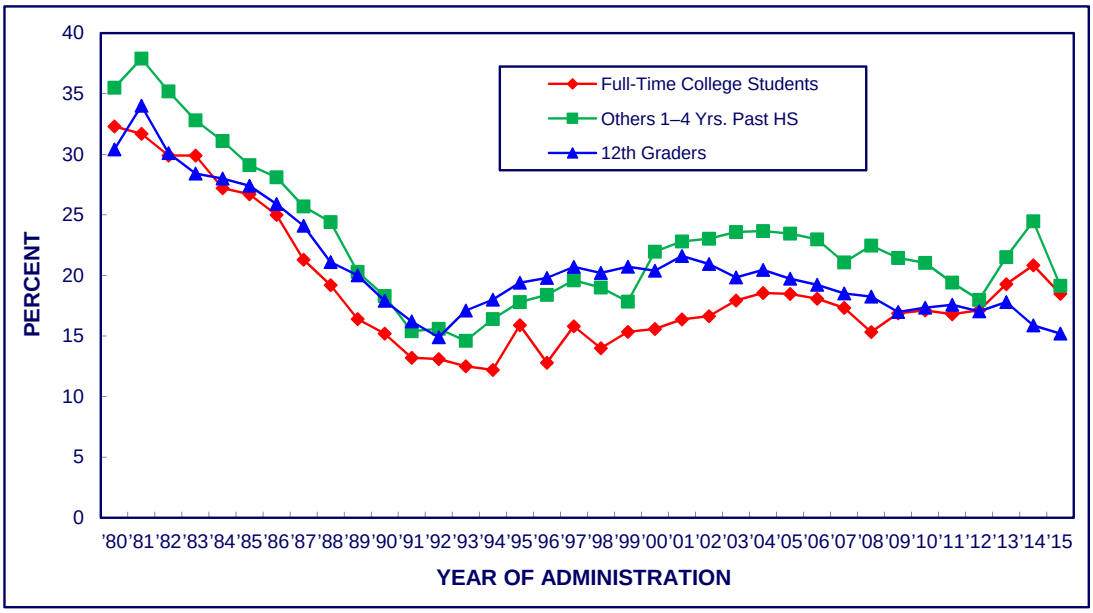
Note. Others refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

FIGURE 9-2

ANY ILLICIT DRUG OTHER THAN MARIJUANA

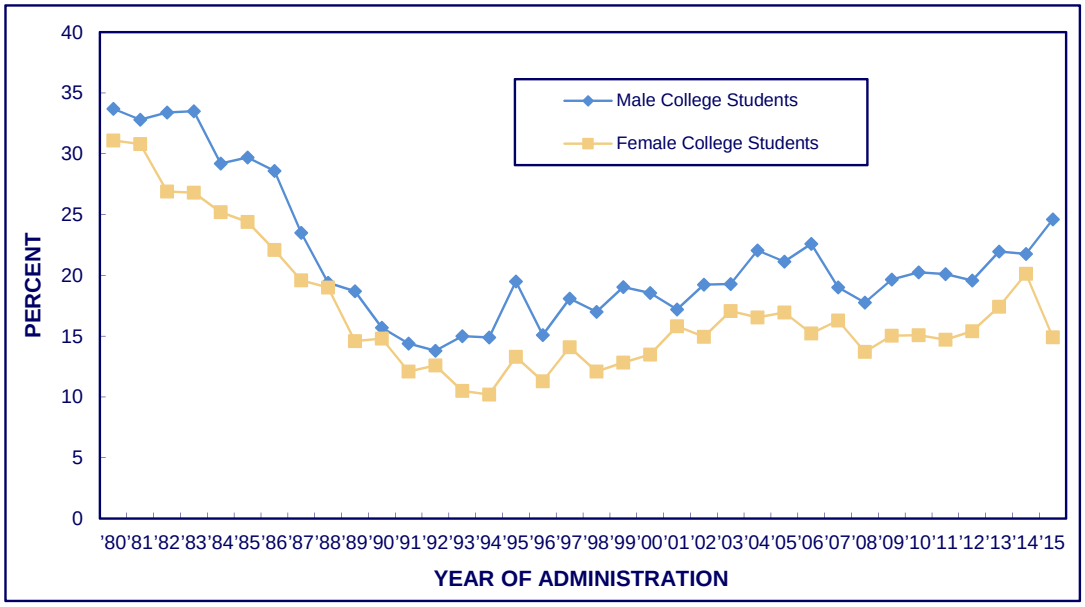
Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



ANY ILLICIT DRUG OTHER THAN MARIJUANA

Trends in Annual Prevalence among Male vs. Female College Students

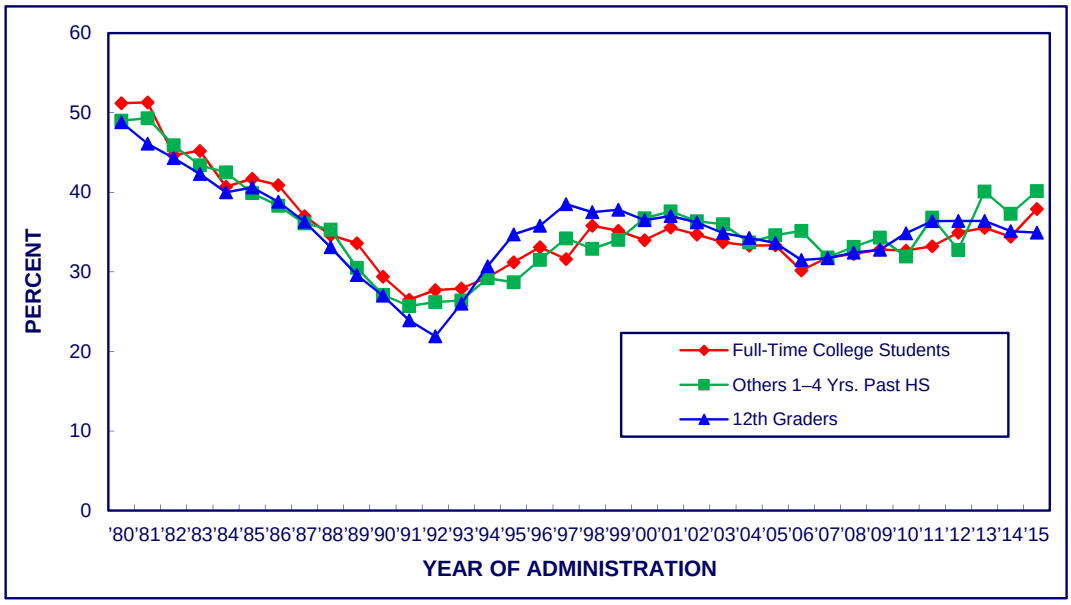


Source. The Monitoring the Future study, the University of Michigan.

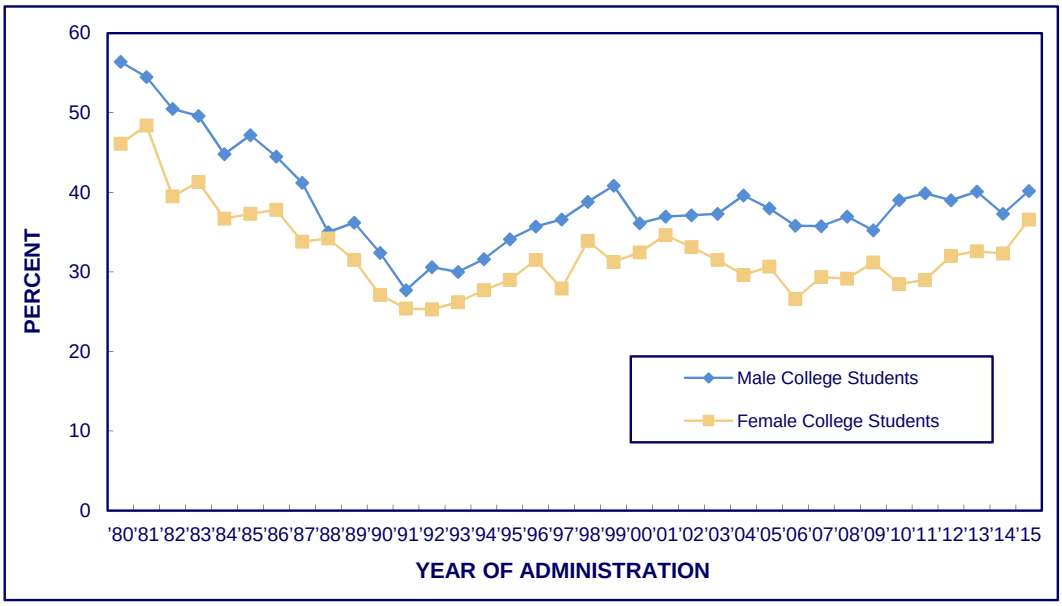
Note. Others refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

FIGURE 9-3a
MARIJUANA
Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



MARIJUANA
Trends in Annual Prevalence among Male vs. Female College Students



Source. The Monitoring the Future study, the University of Michigan.

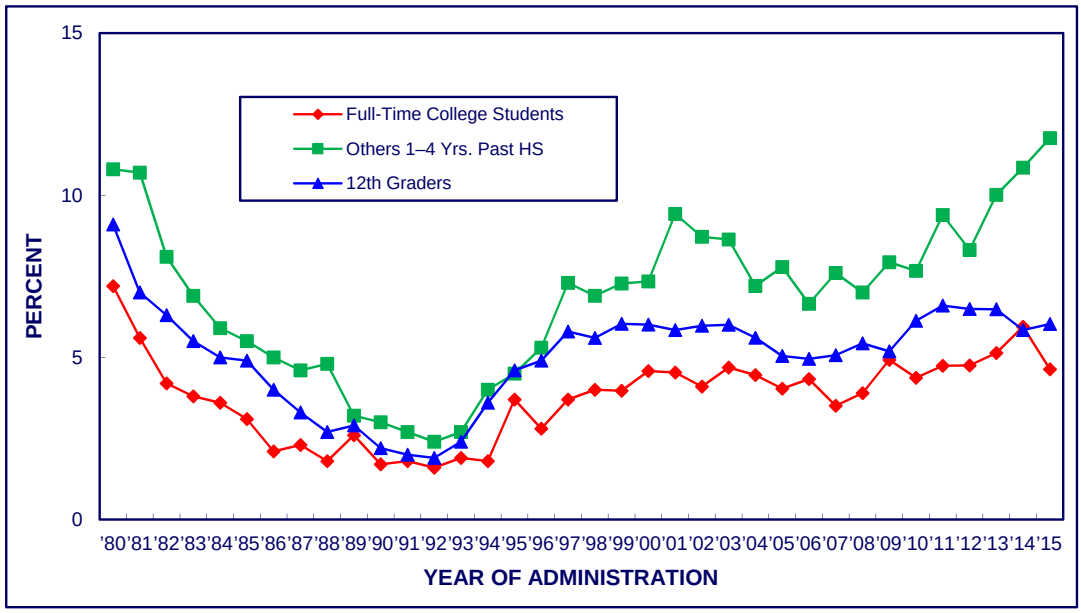
Note. Others refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

FIGURE 9-3b

MARIJUANA

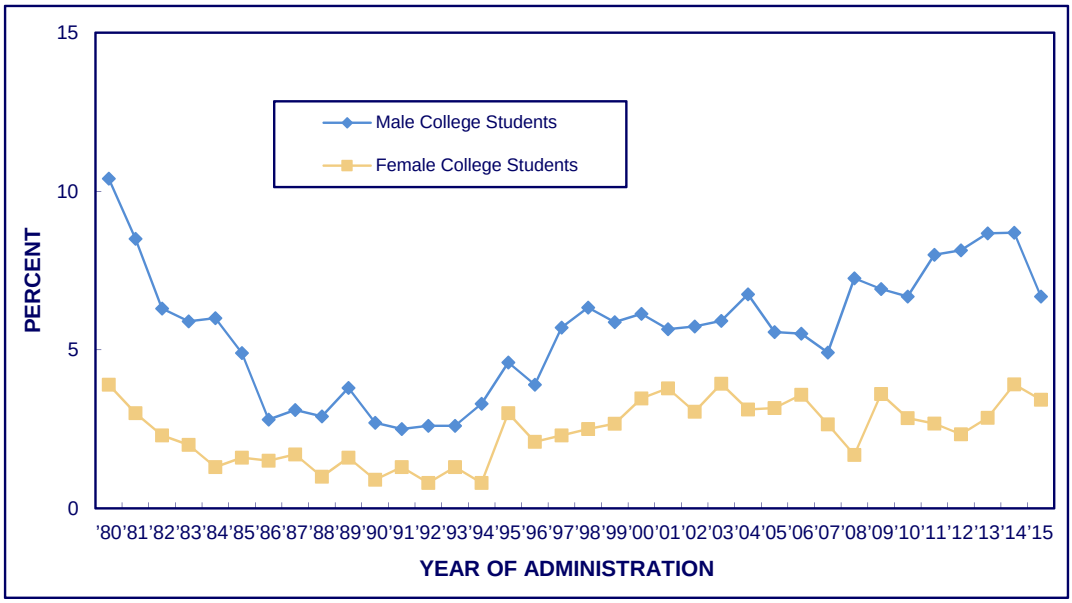
Trends in 30-Day Prevalence of Daily Use among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



MARIJUANA

Trends in 30-Day Prevalence of Daily Use among Male vs. Female College Students

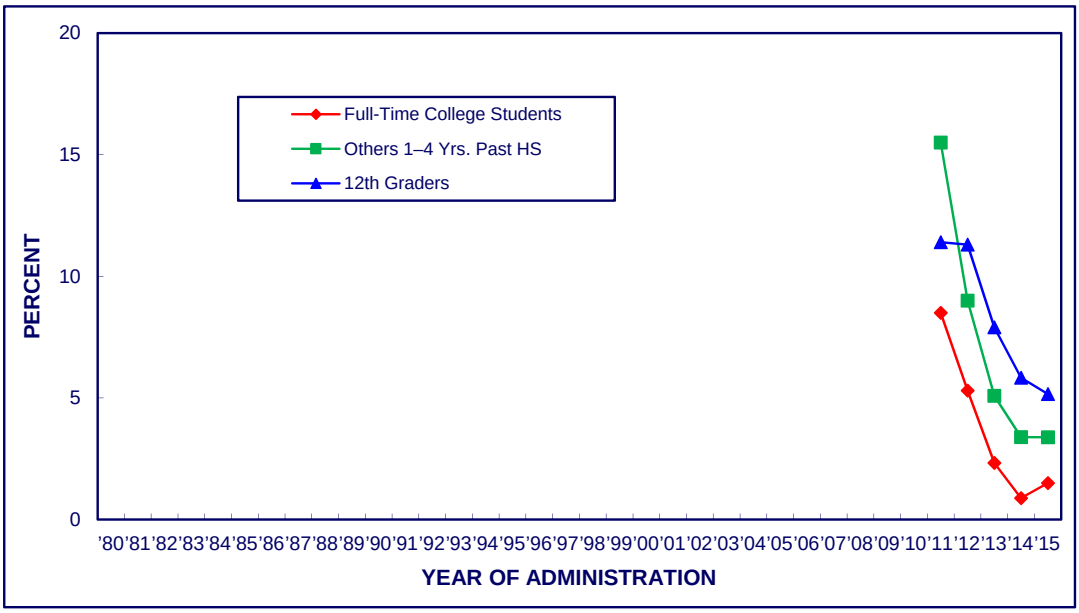


Source. The Monitoring the Future study, the University of Michigan.

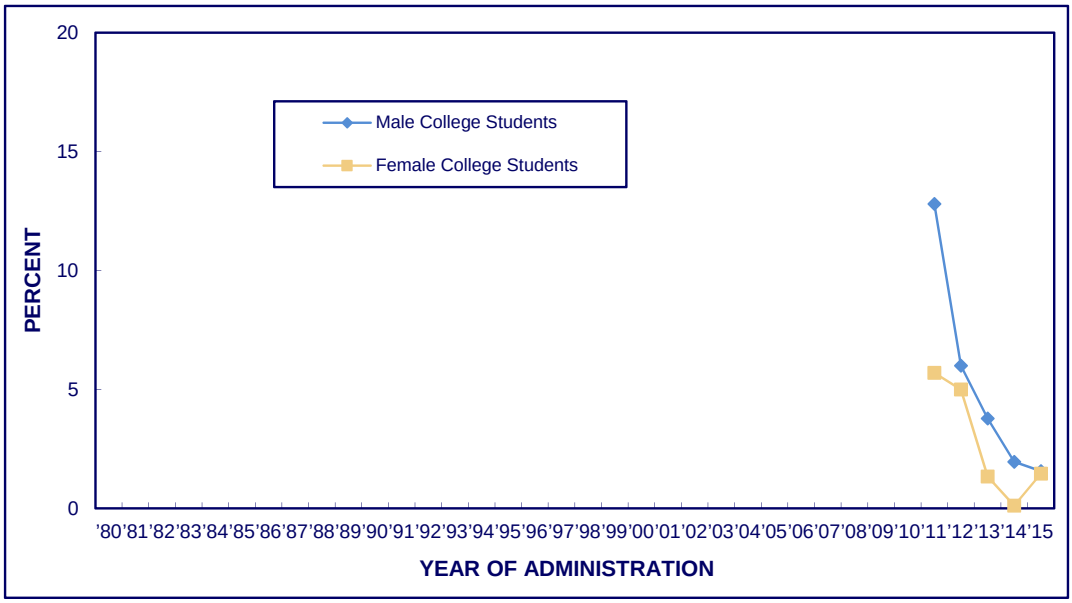
Note. Others refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

FIGURE 9-4
SYNTHETIC MARIJUANA
Trends in Annual Use among College Students vs. Others
1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



SYNTHETIC MARIJUANA
Trends in Annual Prevalence
among Male vs. Female College Students



Source. The Monitoring the Future study, the University of Michigan.

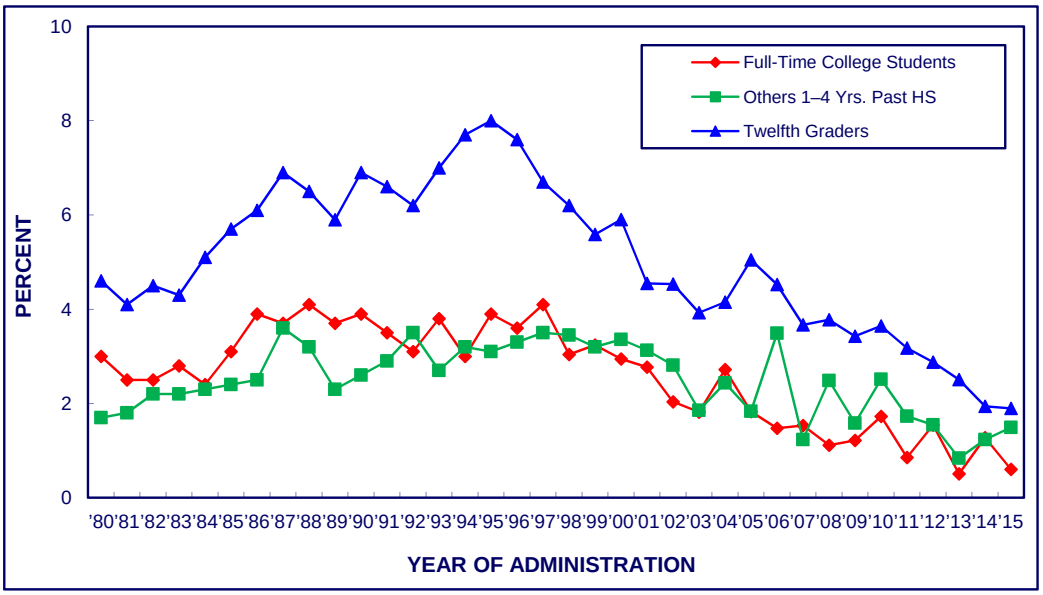
Note. Others refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

FIGURE 9-5

INHALANTS [a]

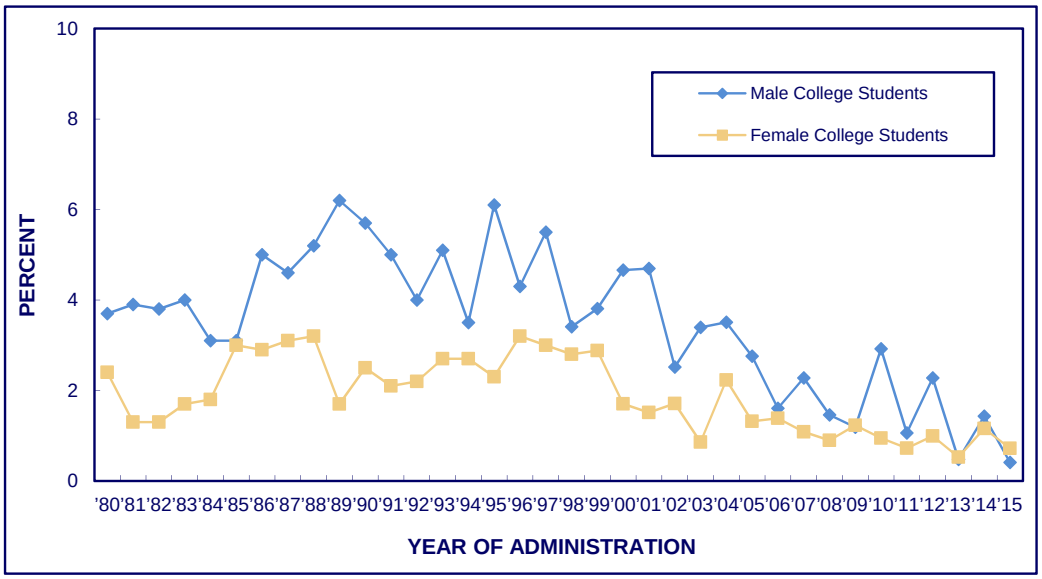
Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



INHALANTS [a]

Trends in Annual Prevalence among Male vs. Female College Students



Source. The Monitoring the Future study, the University of Michigan.

Note. Others refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

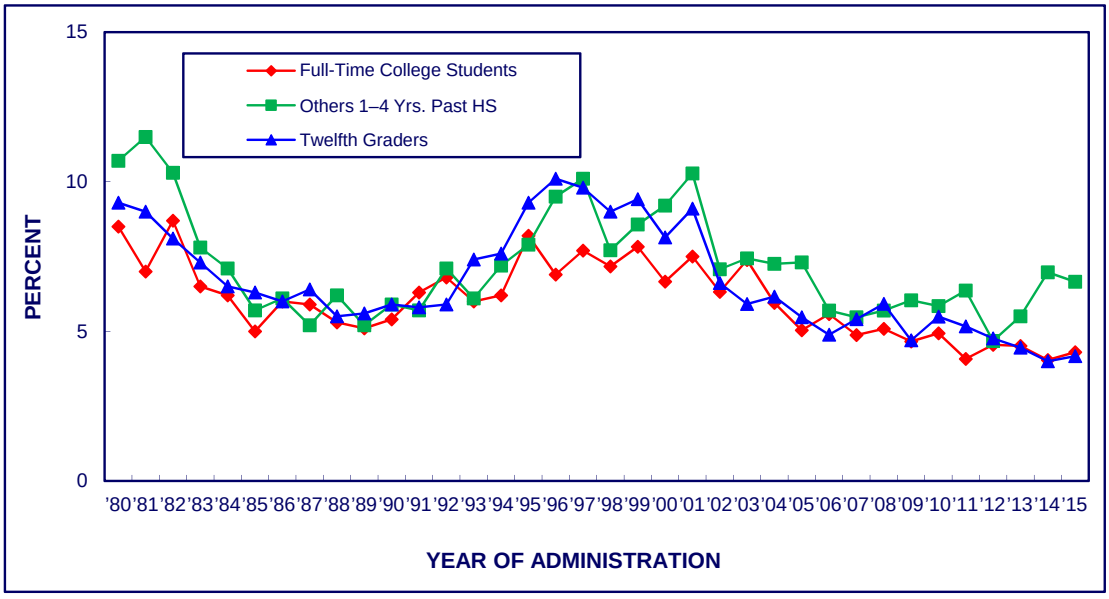
[a]Unadjusted for the possible underreporting of amyl and butyl nitrites.

FIGURE 9-6

HALLUCINOGENS [a]

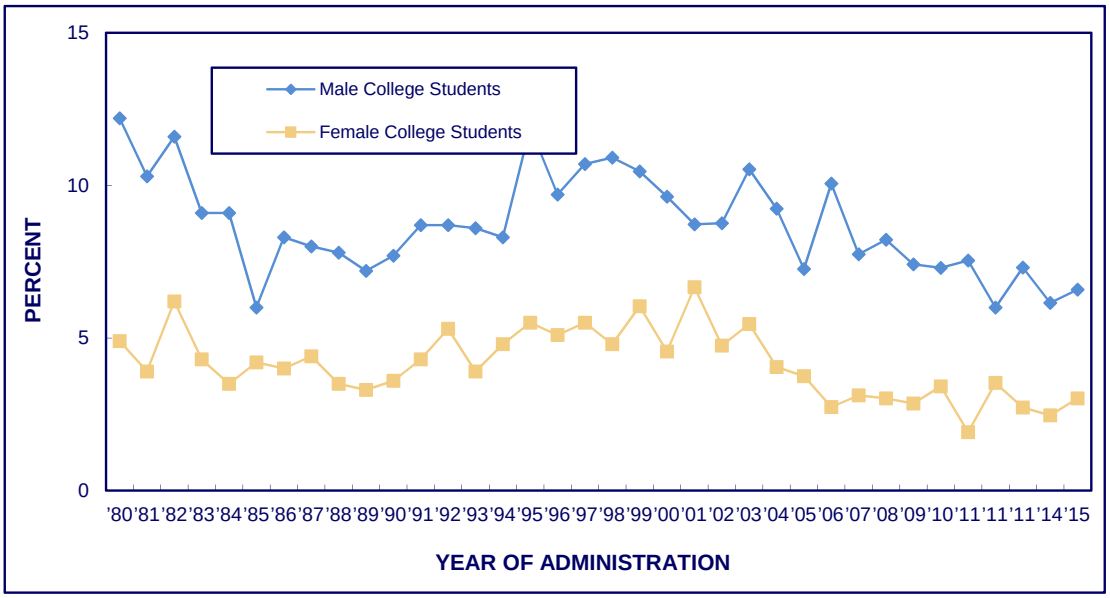
Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



HALLUCINOGENS [a]

Trends in Annual Prevalence among Male vs. Female College Students



Source. The Monitoring the Future study, the University of Michigan.

Note. Others refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

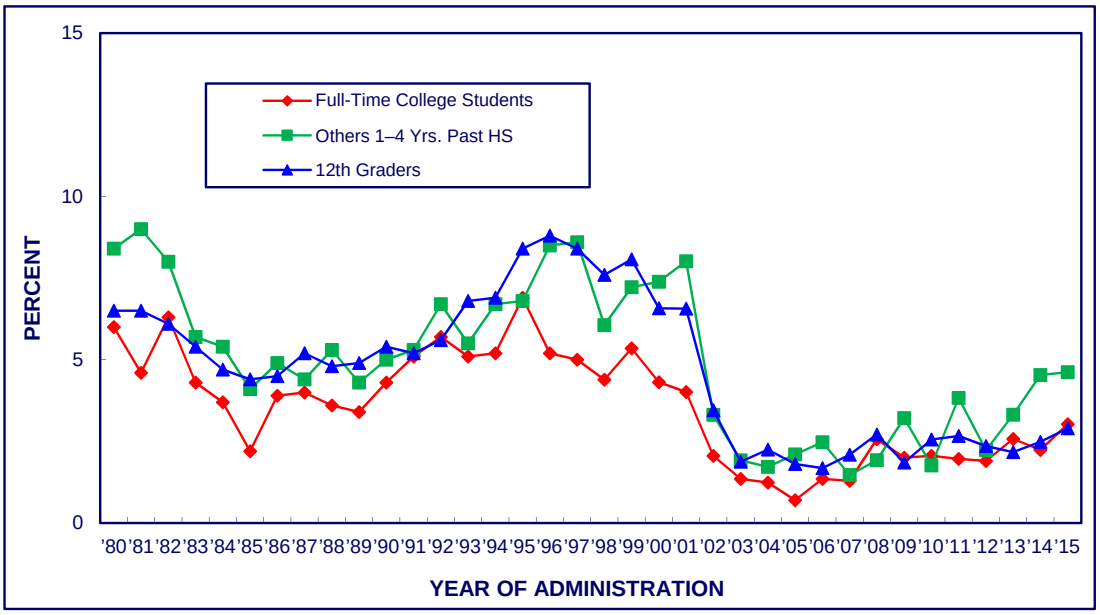
[a]Unadjusted for the possible underreporting of PCP.

FIGURE 9-7

LSD

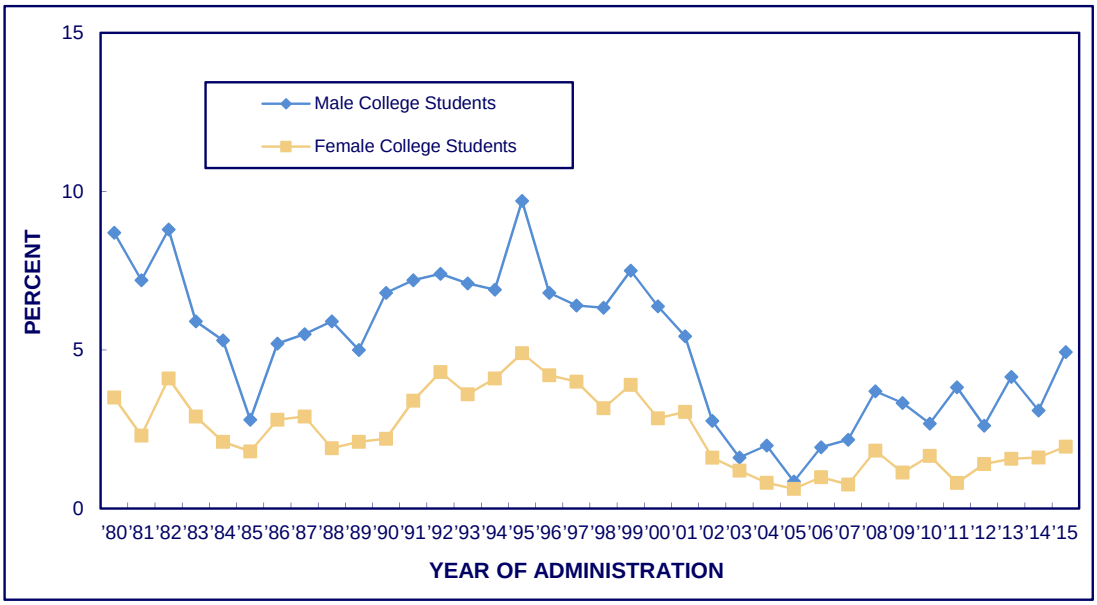
Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



LSD

Trends in Annual Prevalence among Male vs. Female College Students

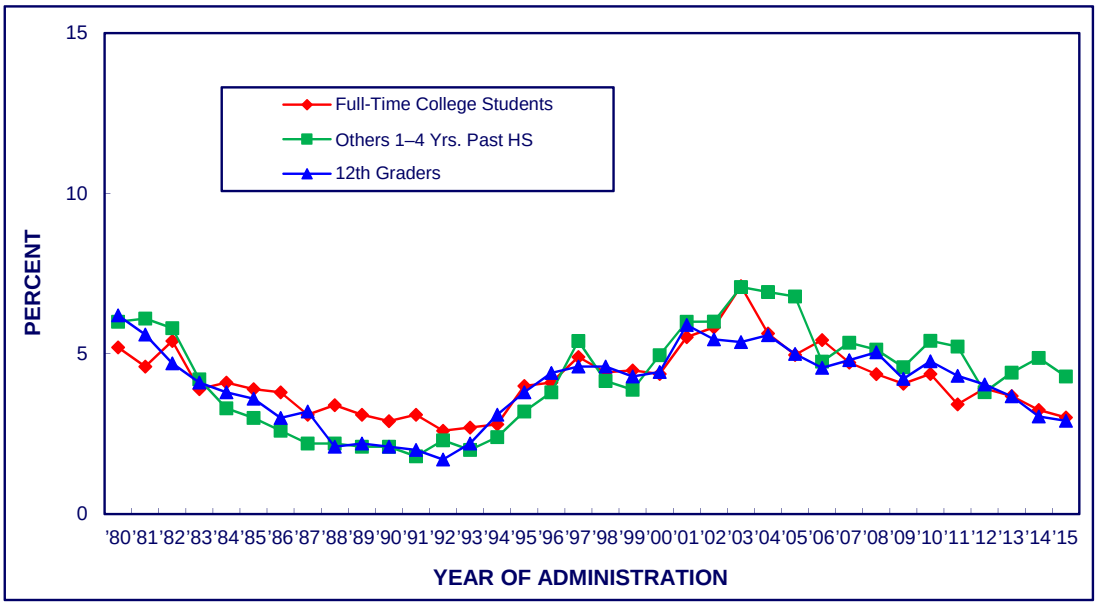


Source. The Monitoring the Future study, the University of Michigan.

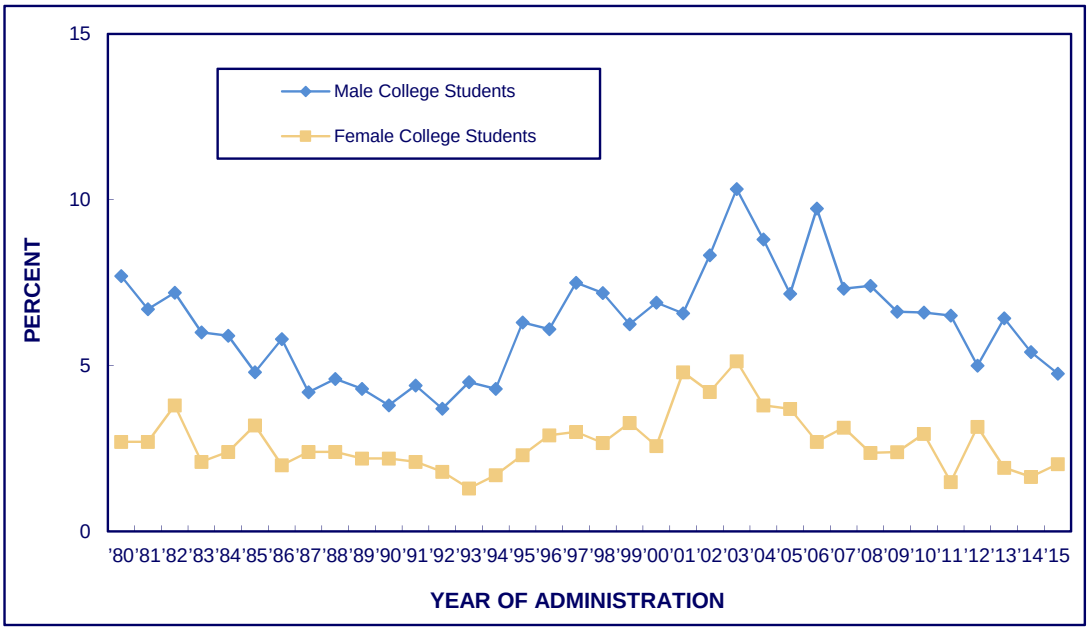
Note. Others refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

FIGURE 9-8
HALLUCINOGENS OTHER THAN LSD
Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



HALLUCINOGENS OTHER THAN LSD
Trends in Annual Prevalence among Male vs. Female College Students



Source. The Monitoring the Future study, the University of Michigan.

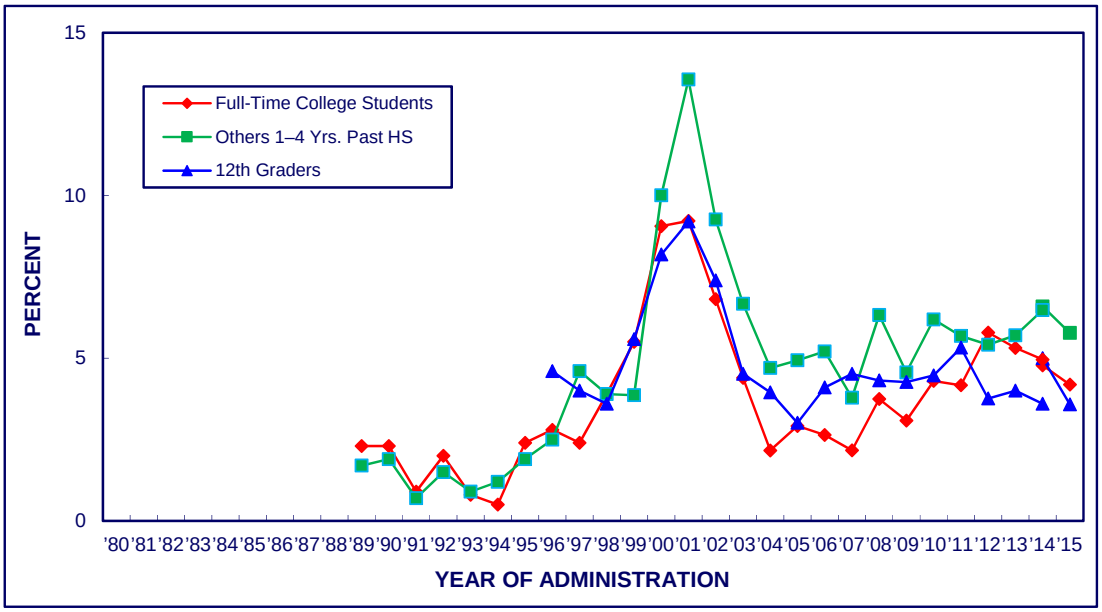
Note. Others refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

FIGURE 9-9

ECSTASY (MDMA) [a]

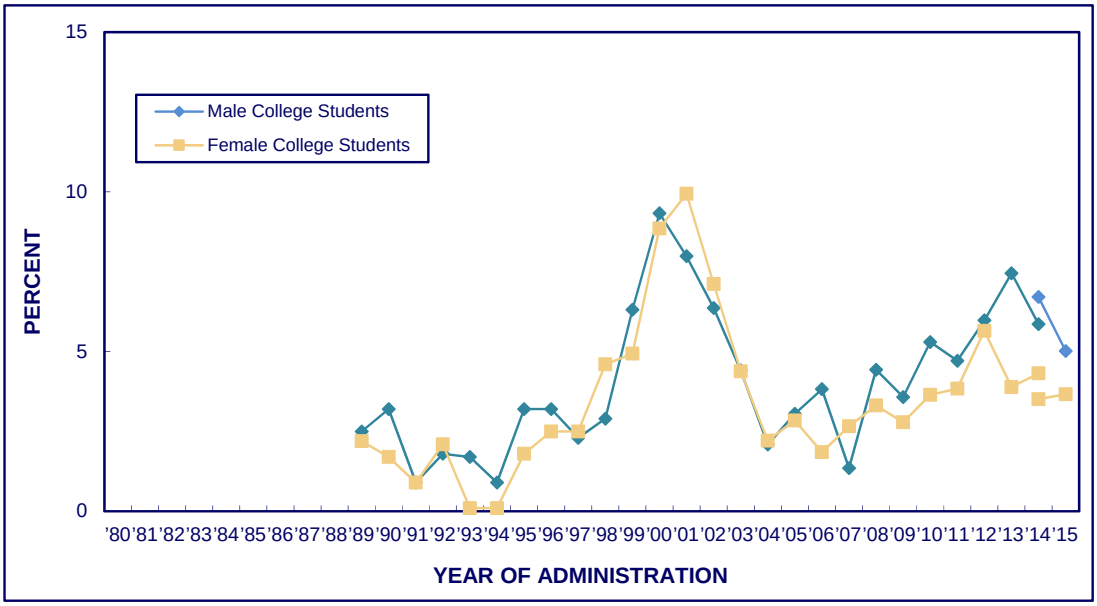
Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



ECSTASY (MDMA) [a]

Trends in Annual Prevalence among Male vs. Female College Students



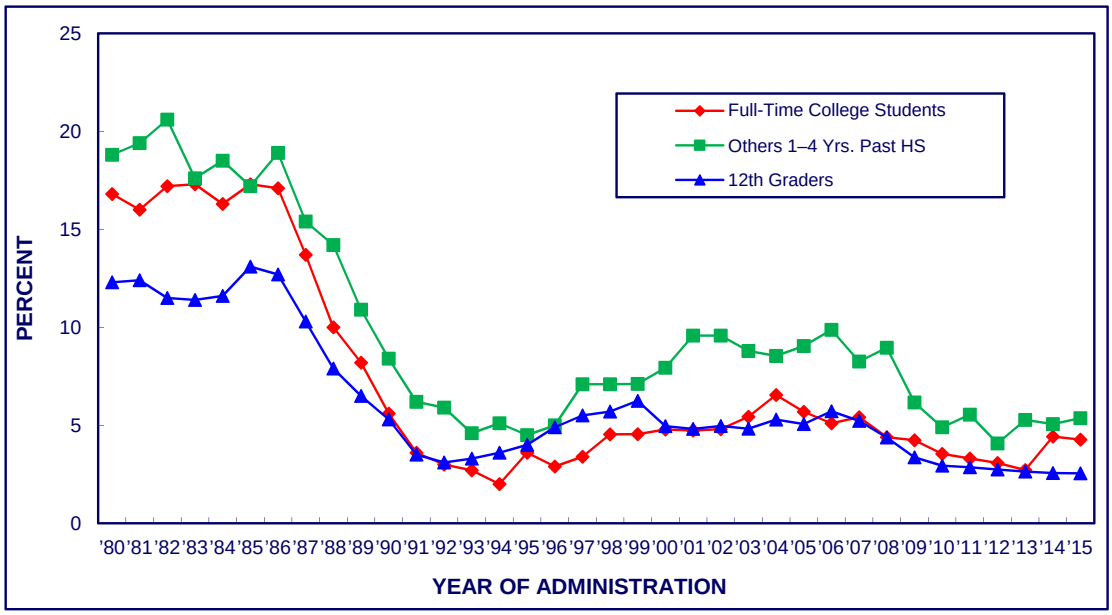
Source. The Monitoring the Future study, the University of Michigan.

Note. Others refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

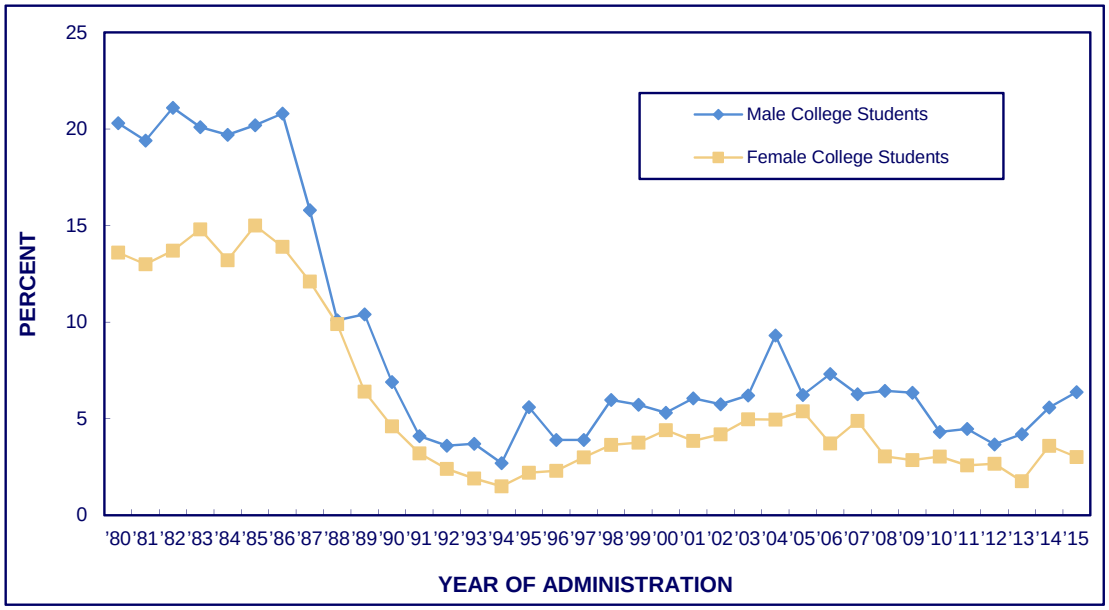
[a]In 2014, a version of the question was added to an additional form that included "molly" in the description. In 2015, the remaining forms were changed to this updated wording. Data for both versions of the question are included here.

FIGURE 9-10
COCAINE
Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



COCAINE
Trends in Annual Prevalence among Male vs. Female College Students



Source. The Monitoring the Future study, the University of Michigan.

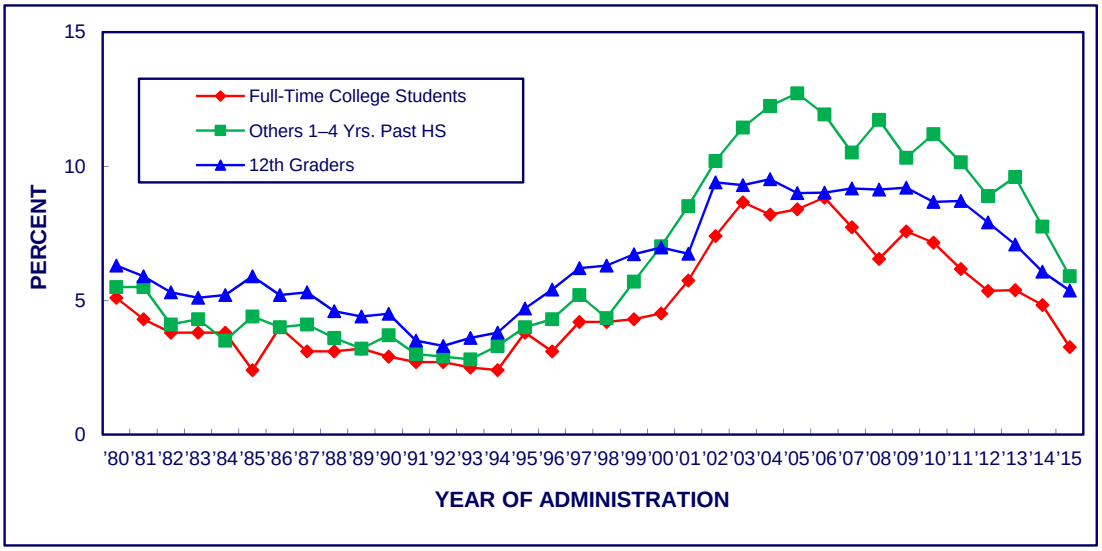
Note. Others refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

FIGURE 9-11a

NARCOTICS OTHER THAN HEROIN [a]

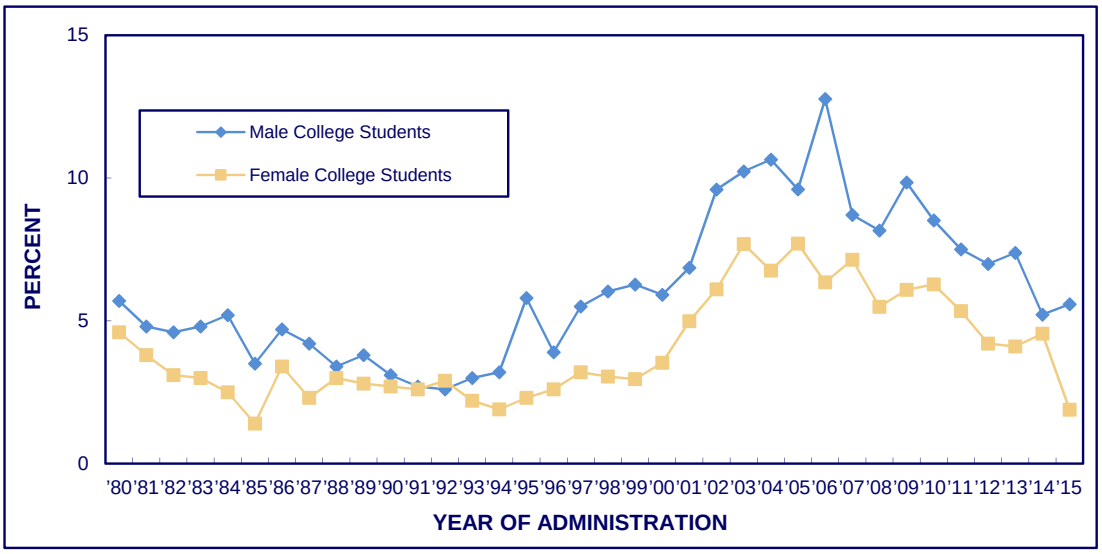
Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



NARCOTICS OTHER THAN HEROIN [a]

Trends in Annual Prevalence among Male vs. Female College Students

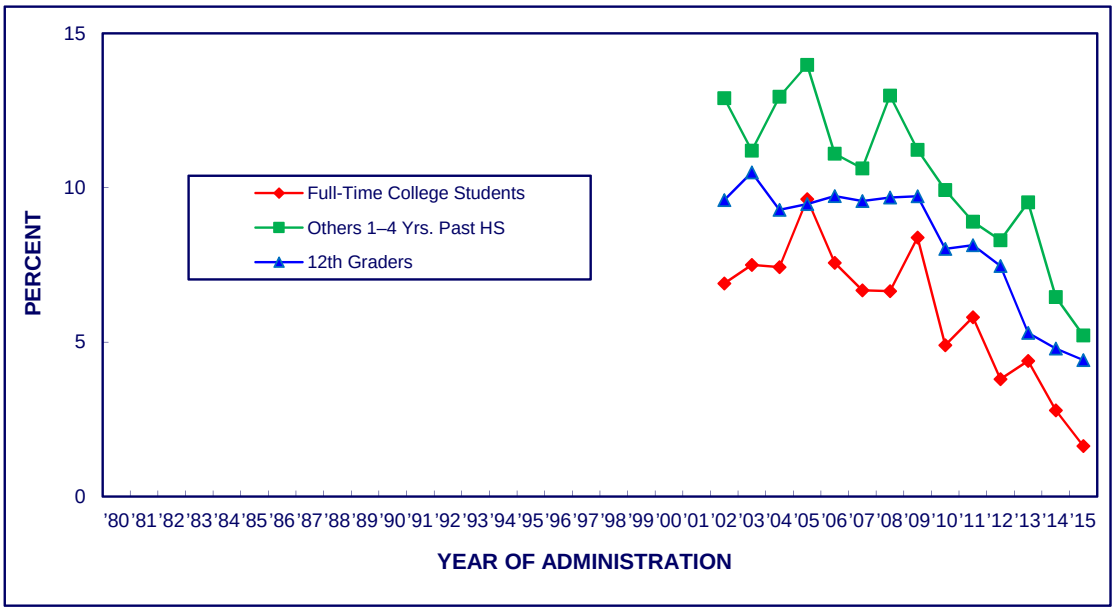


Source. The Monitoring the Future study, the University of Michigan.

Note. Others refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

[a]In 2002 the question text was changed on half of the questionnaire forms. The list of examples of narcotics other than heroin was updated: Talwin, laudanum, and paregoric—all of which had negligible rates of use by 2001—were replaced by Vicodin, OxyContin, and Percocet. The 2002 data presented here are based on the changed forms only. In 2003 the remaining forms were changed to the new wording.

FIGURE 9-11b
VICODIN
Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School
(Twelfth graders included for comparison.)

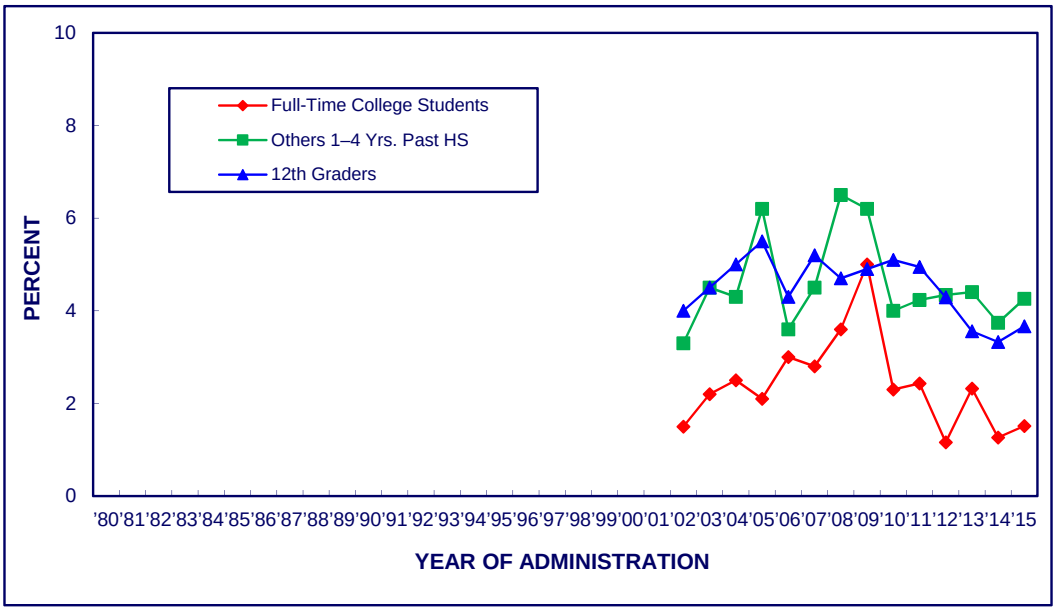


Source. The Monitoring the Future study, the University of Michigan.

Note. Others refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

FIGURE 9-11c
OXYCONTIN
Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)

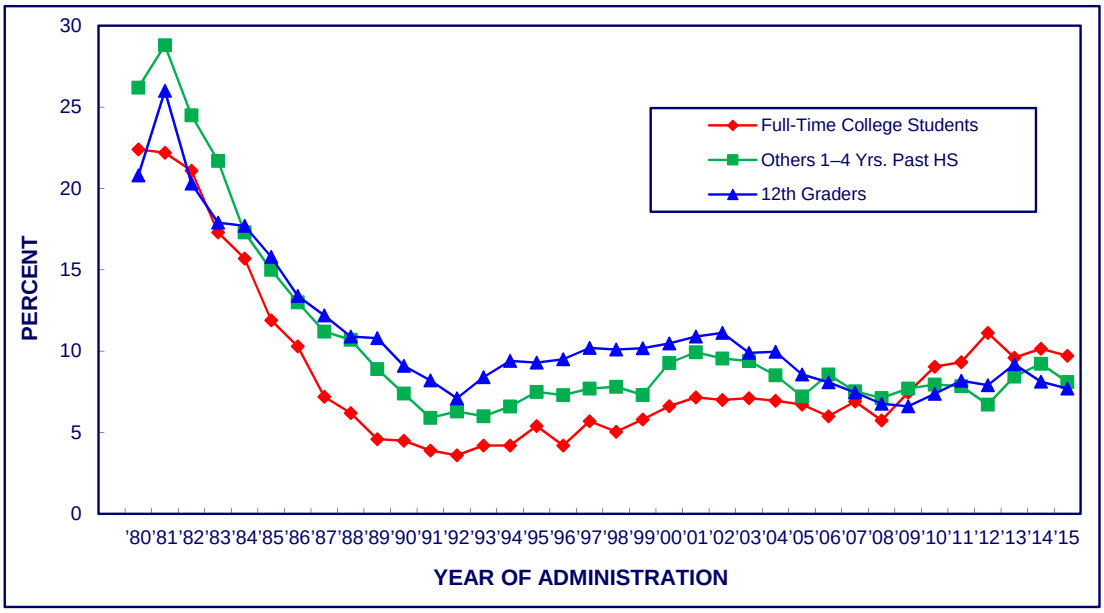


Source. The Monitoring the Future study, the University of Michigan.

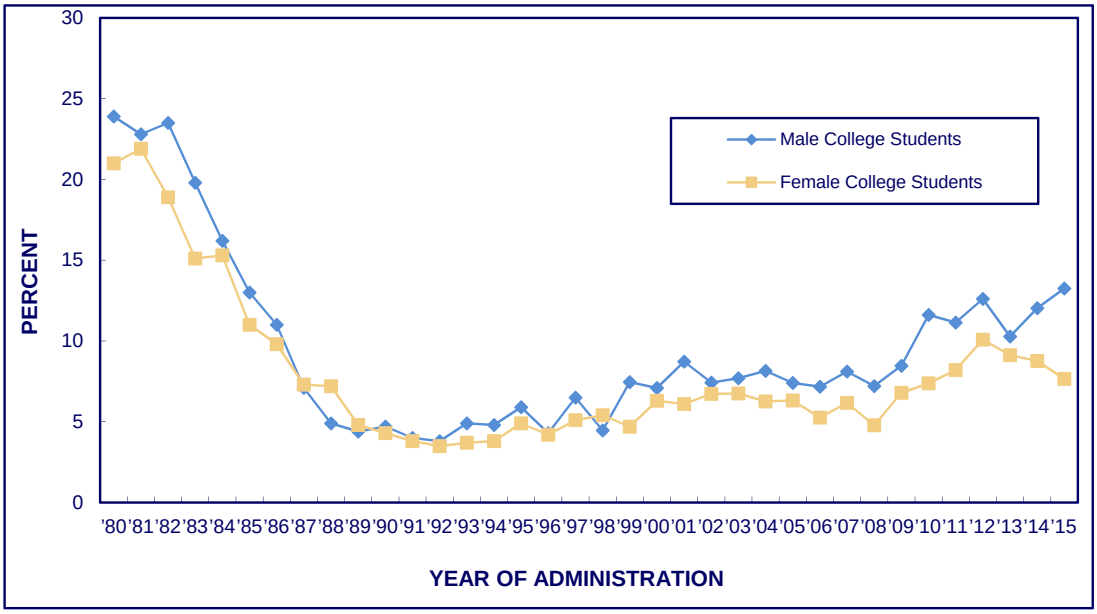
Note. Others refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

FIGURE 9-12
AMPHETAMINES
Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



AMPHETAMINES
Trends in Annual Prevalence among Male vs. Female College Students

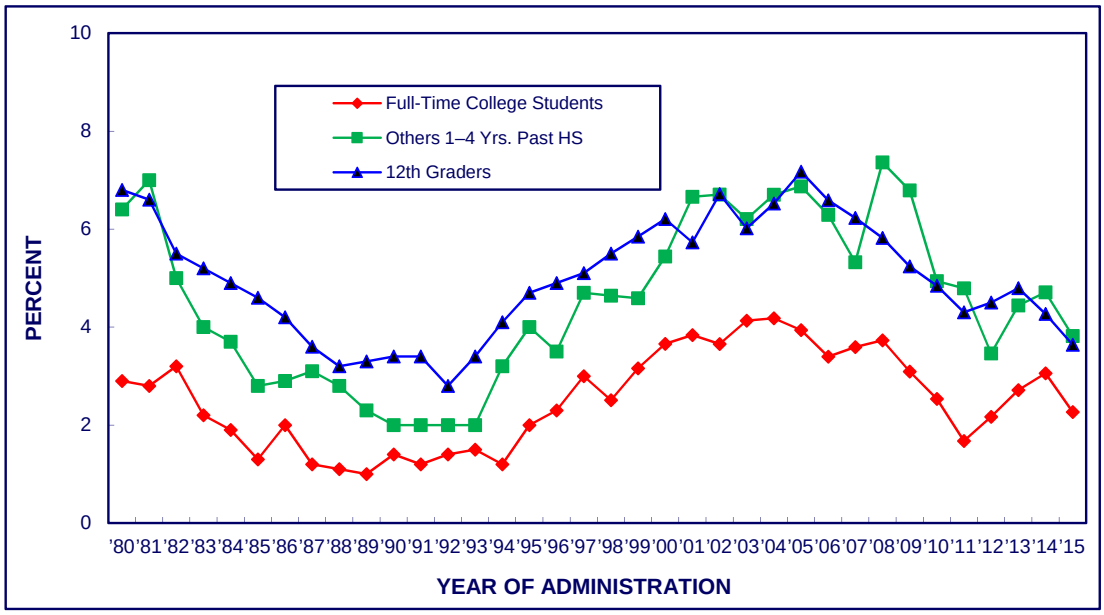


Source. The Monitoring the Future study, the University of Michigan.

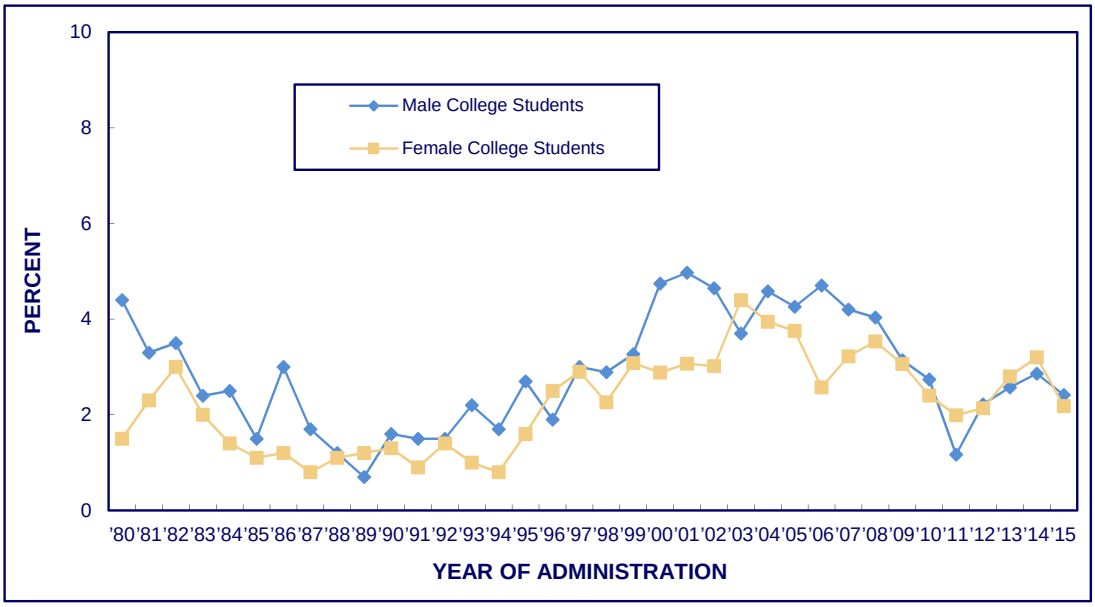
Note. Others refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

FIGURE 9-13
SEDATIVES (BARBITURATES)
Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



SEDATIVES (BARBITURATES)
Trends in Annual Prevalence among Male vs. Female College Students

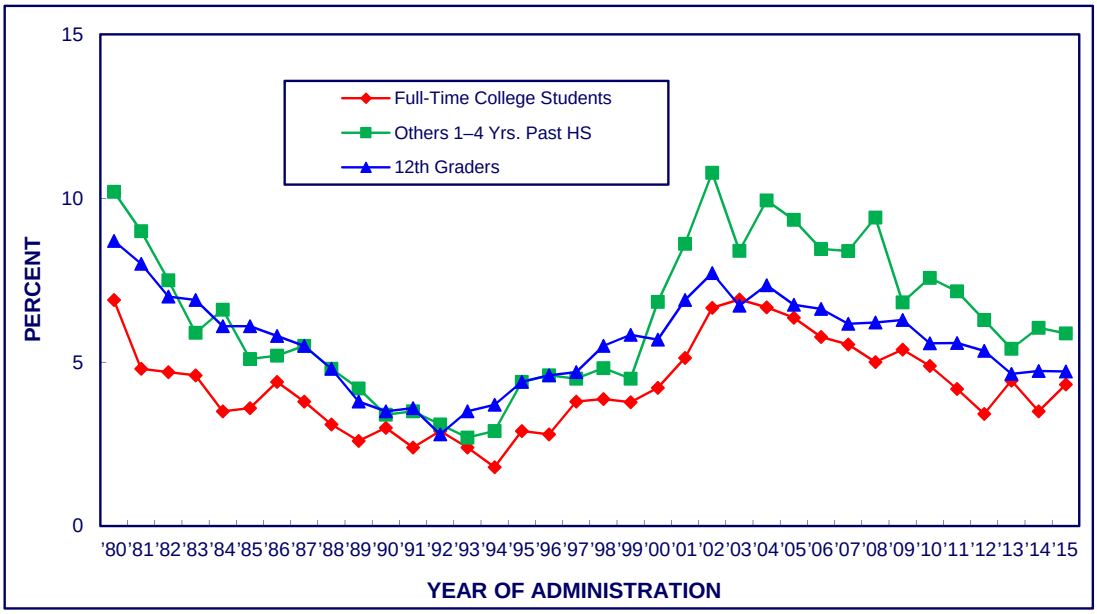


Source. The Monitoring the Future study, the University of Michigan.

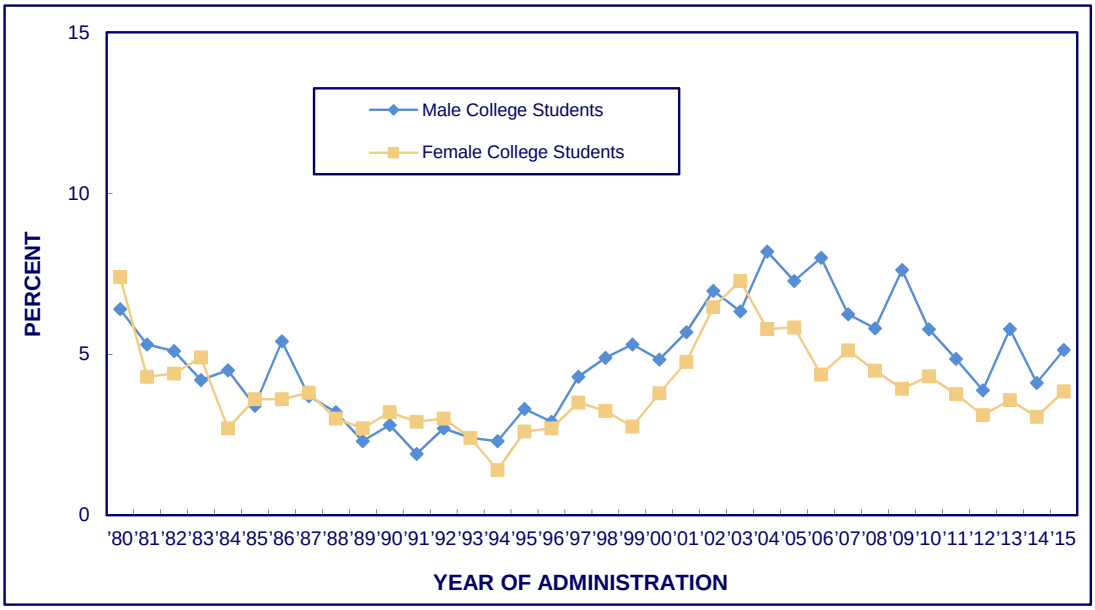
Note. Others refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

FIGURE 9-14
TRANQUILIZERS
Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



TRANQUILIZERS
Trends in Annual Prevalence among Male vs. Female College Students

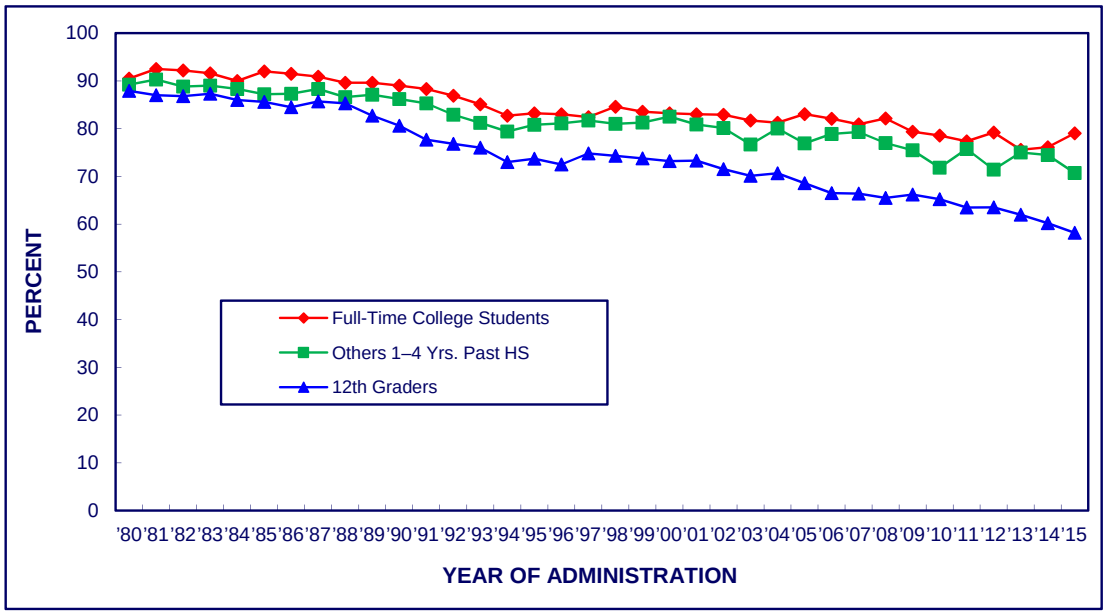


Source. The Monitoring the Future study, the University of Michigan.

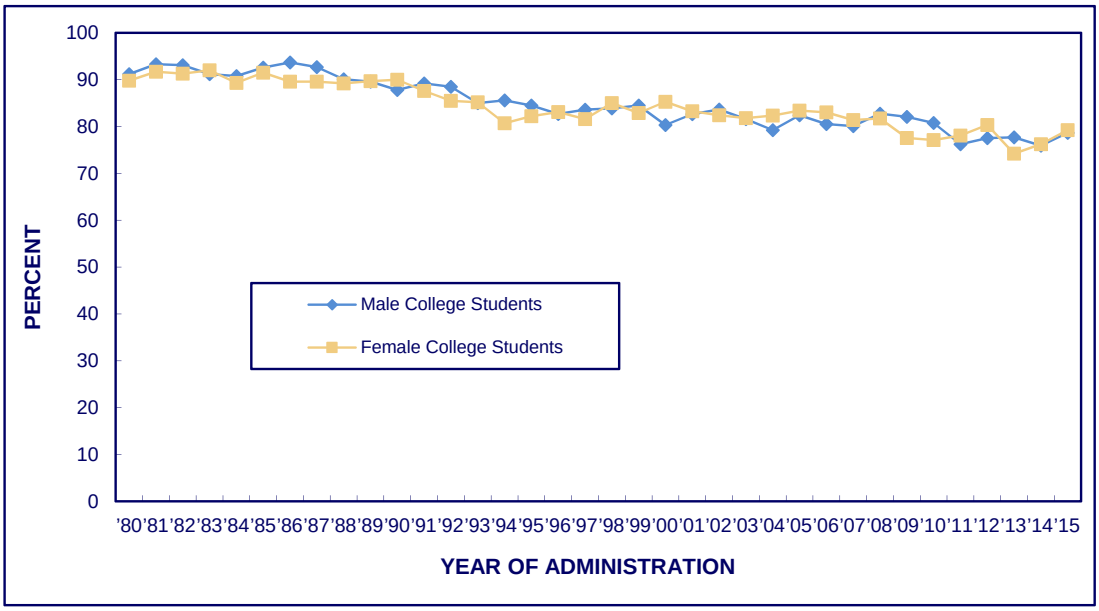
Note. Others refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

FIGURE 9-15a
ALCOHOL
Trends in Annual Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



ALCOHOL
Trends in Annual Prevalence among Male vs. Female College Students

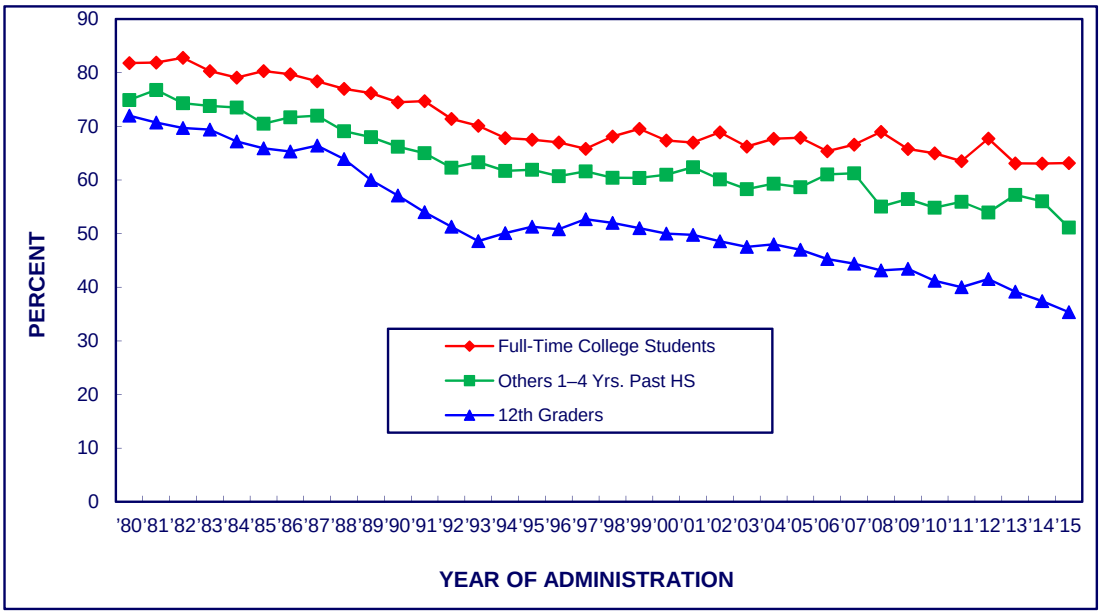


Source. The Monitoring the Future study, the University of Michigan.

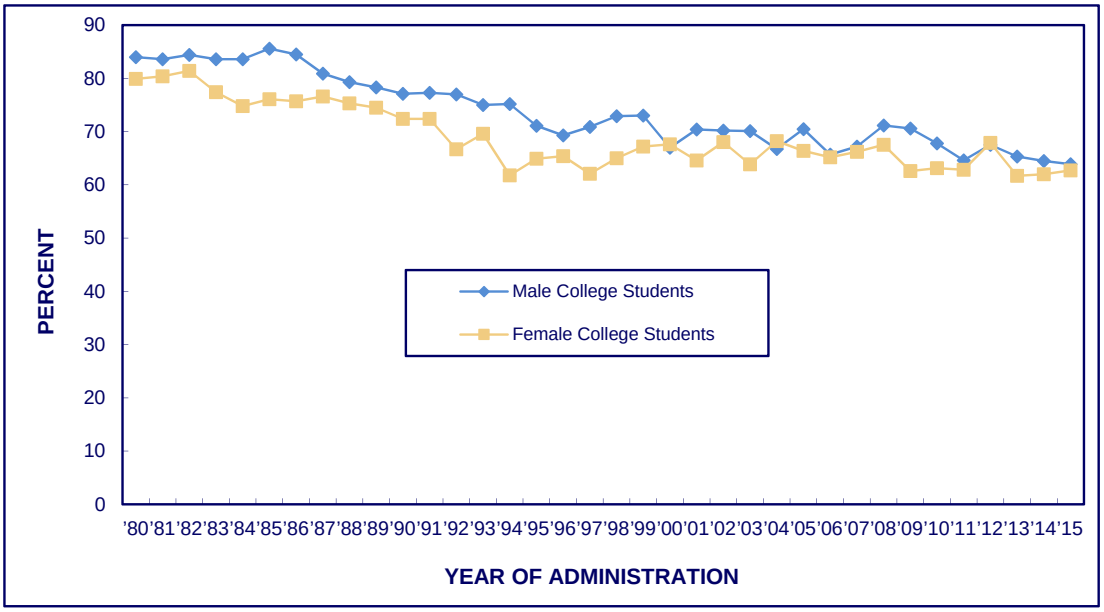
Note. Others refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

FIGURE 9-15b
ALCOHOL
Trends in 30-Day Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



ALCOHOL
Trends in 30-Day Prevalence among Male vs. Female College Students



Source. The Monitoring the Future study, the University of Michigan.

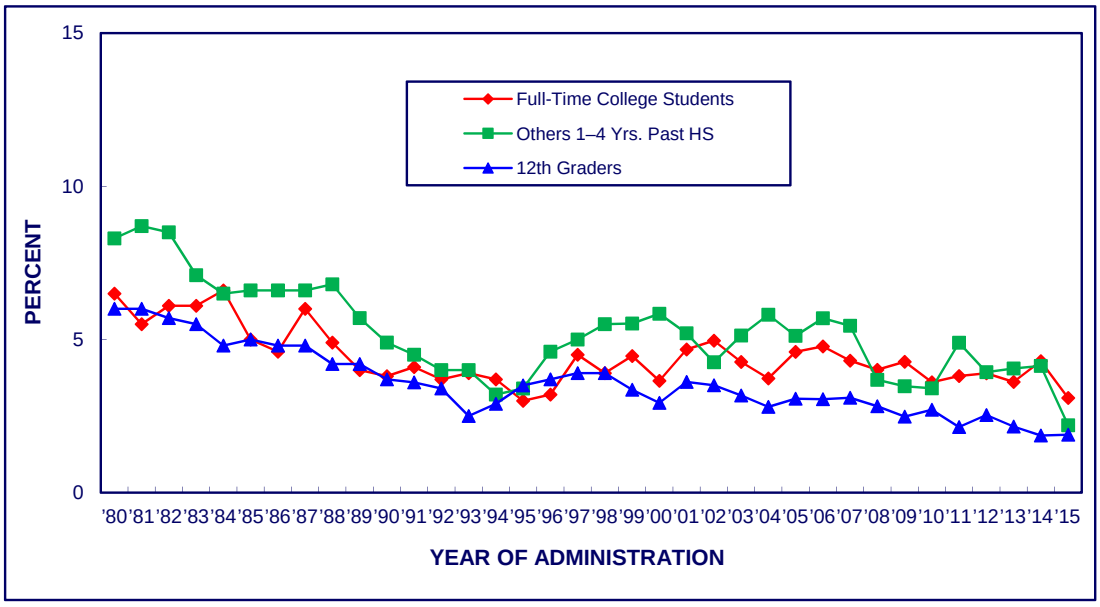
Note. Others refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

FIGURE 9-15c

ALCOHOL

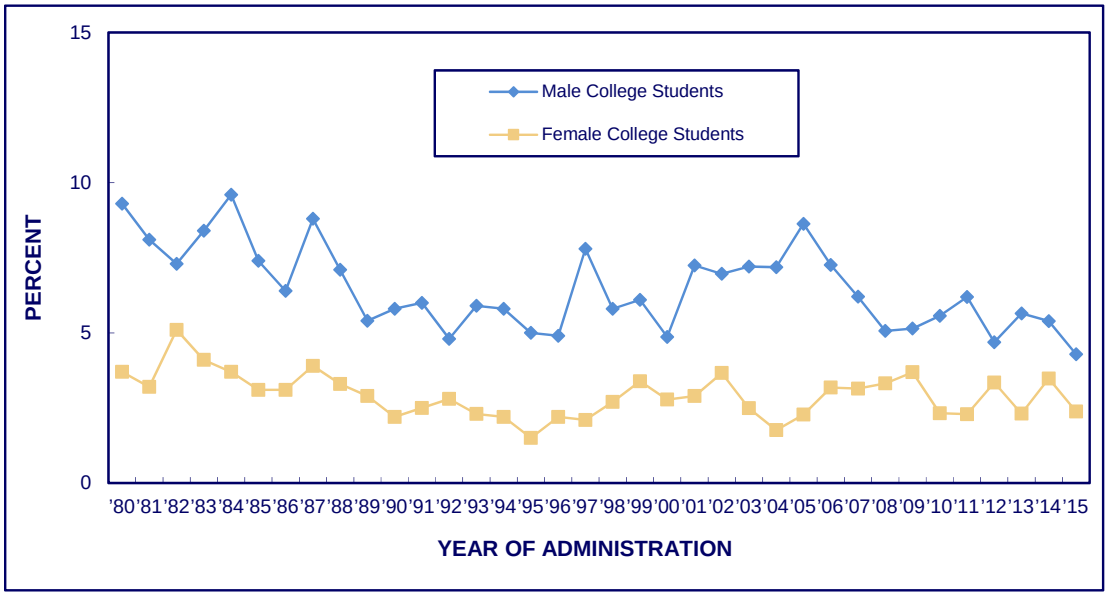
Trends in 30-Day Prevalence of Daily Use among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



ALCOHOL

Trends in 30-Day Prevalence of Daily Use among Male vs. Female College Students



Source. The Monitoring the Future study, the University of Michigan.

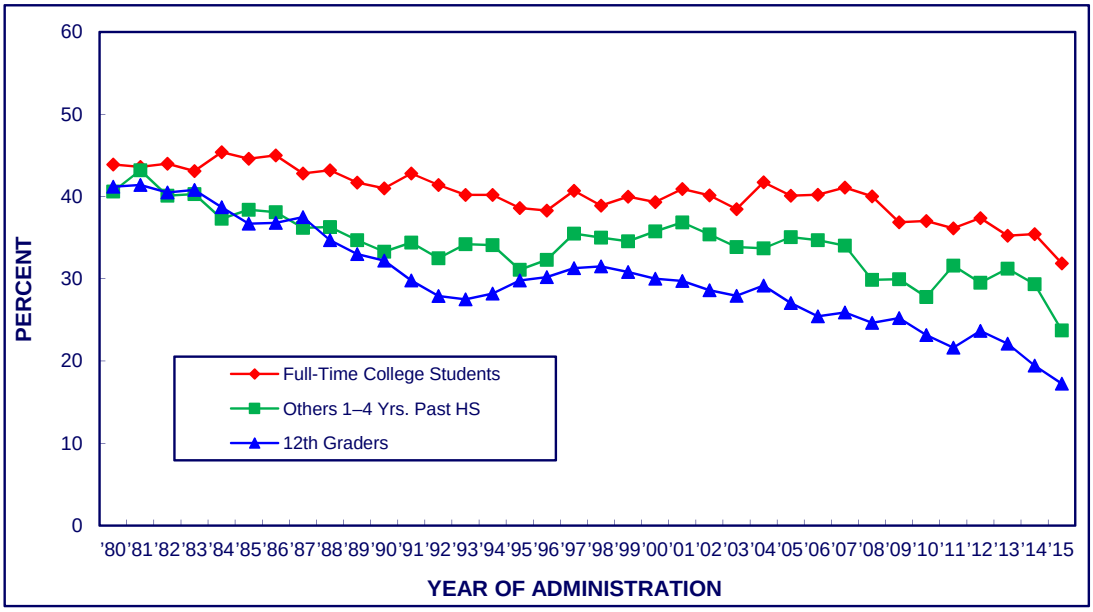
Note. Others refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

FIGURE 9-15d

ALCOHOL

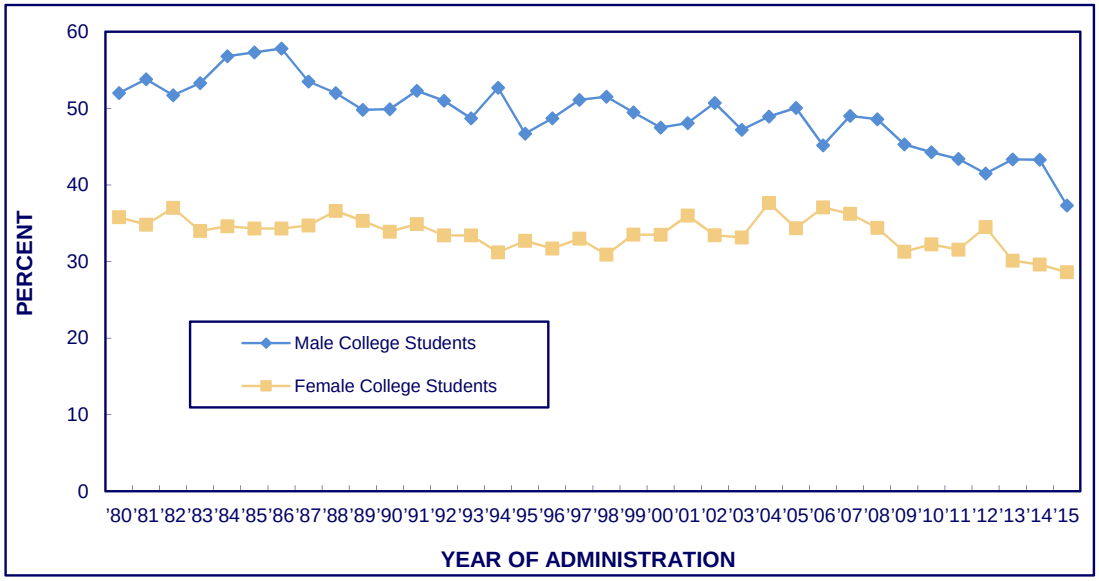
Trends in 2-Week Prevalence of 5 or More Drinks in a Row among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



ALCOHOL

Trends in 2-Week Prevalence of 5 or More Drinks in a Row among Male vs. Female College Students

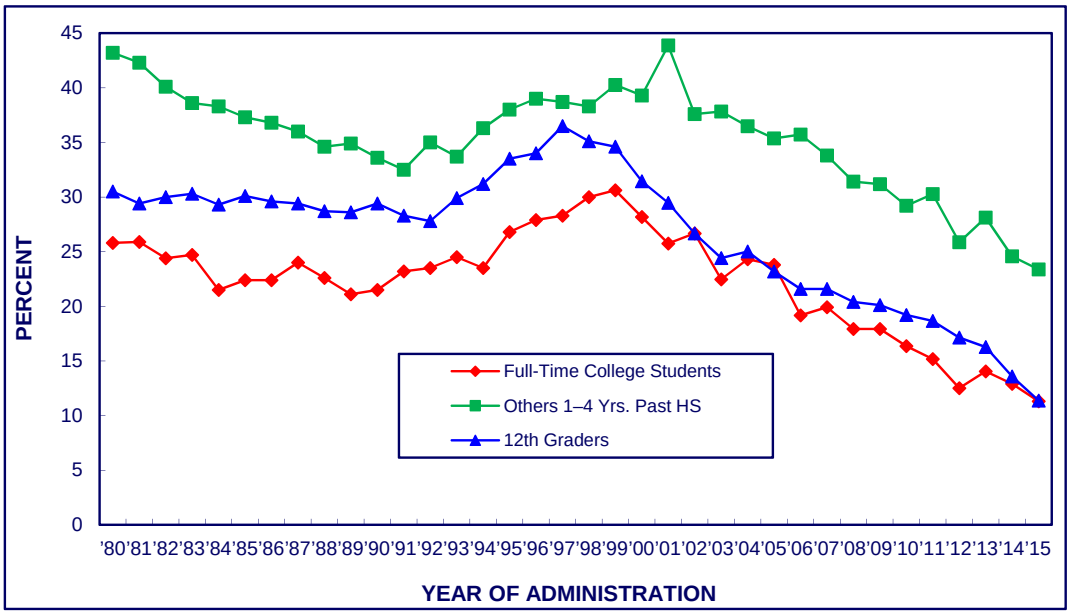


Source. The Monitoring the Future study, the University of Michigan.

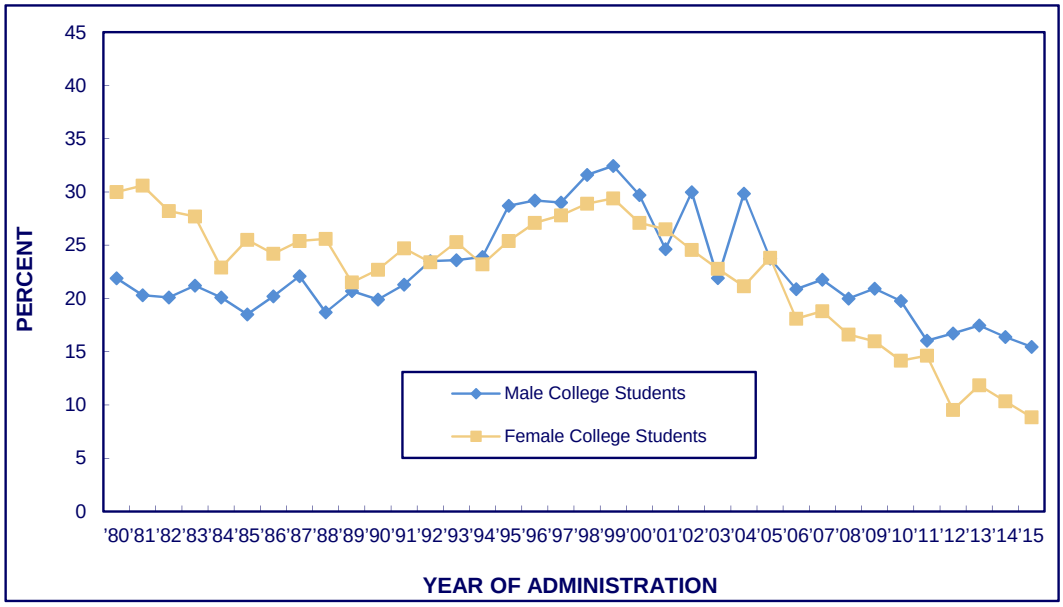
Note. Others refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

FIGURE 9-16a
CIGARETTES
Trends in 30-Day Prevalence among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



CIGARETTES
Trends in 30-Day Prevalence among Male vs. Female College Students



Source. The Monitoring the Future study, the University of Michigan.

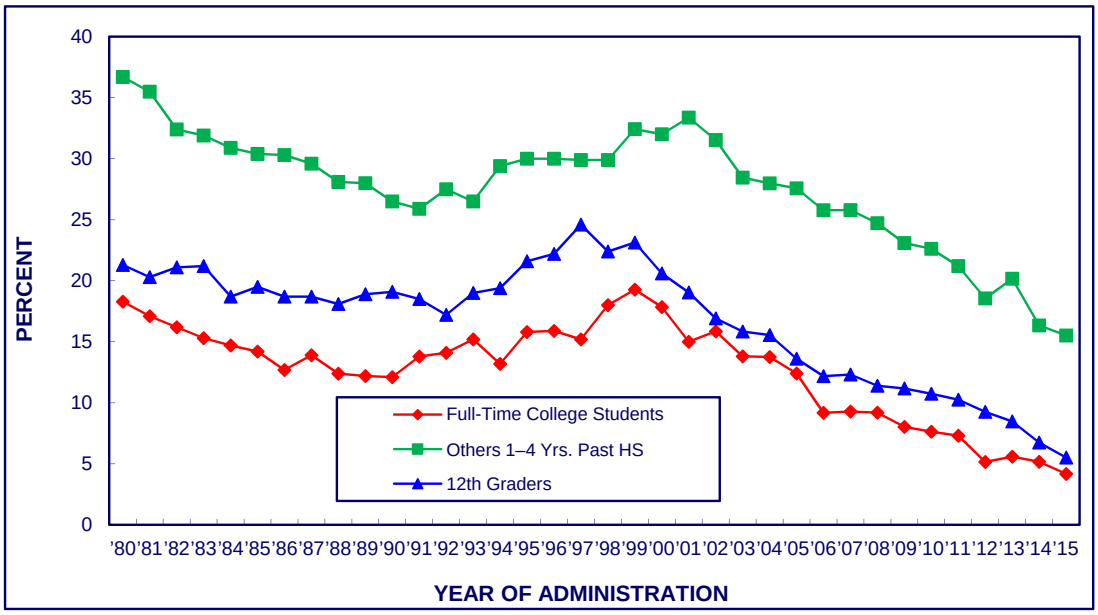
Note. Others refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

FIGURE 9-16b

CIGARETTES

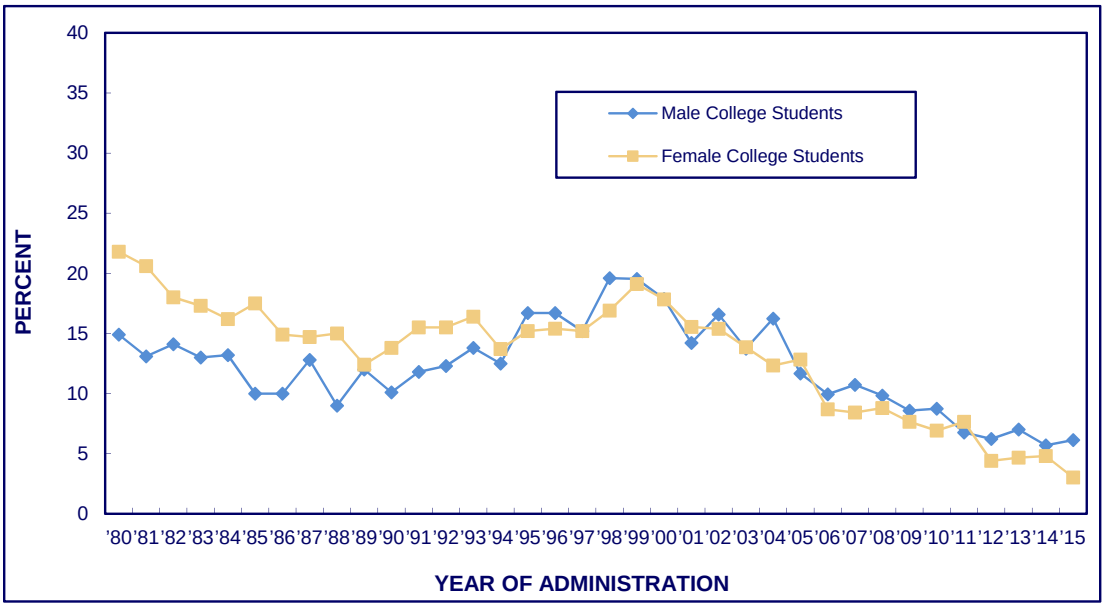
Trends in 30-Day Prevalence of Daily Use among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



CIGARETTES

Trends in 30-Day Prevalence of Daily Use among Male vs. Female College Students



Source. The Monitoring the Future study, the University of Michigan.

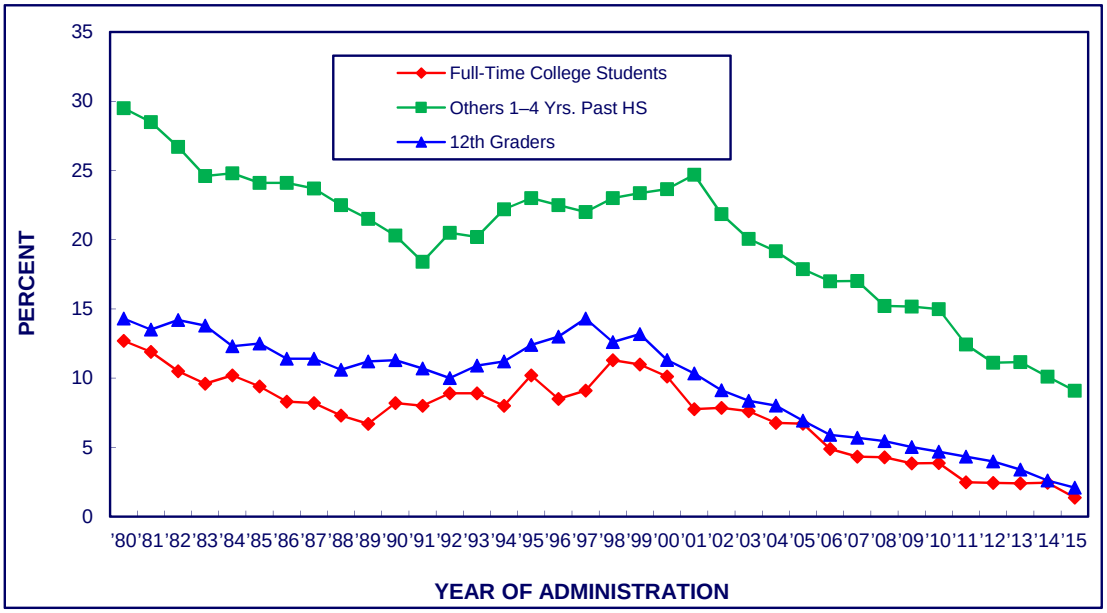
Note. Others refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

FIGURE 9-16c

CIGARETTES

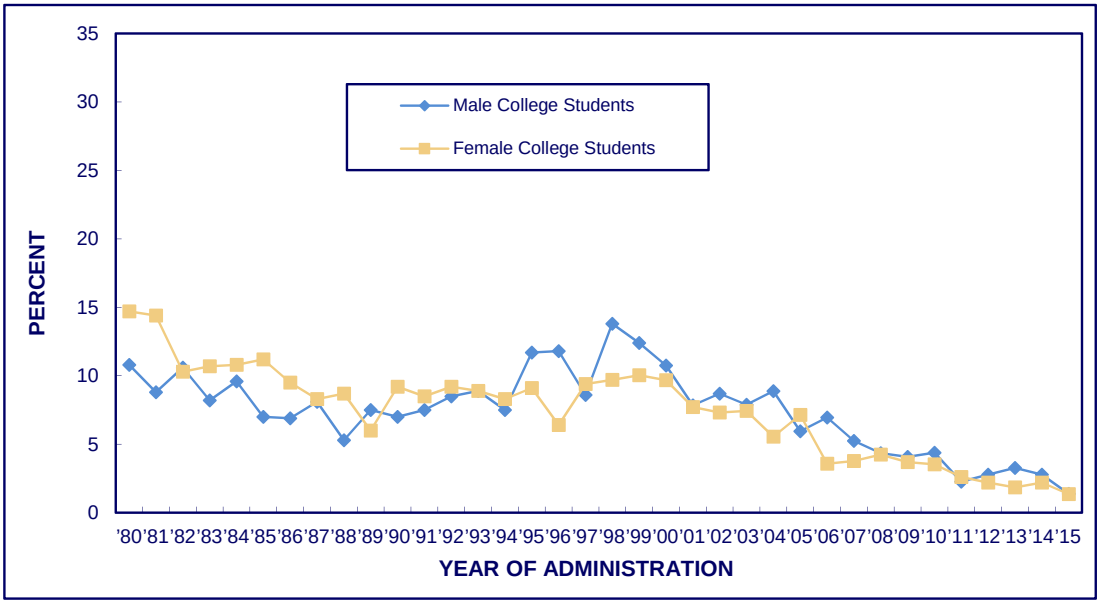
Trends in 30-Day Prevalence of Smoking a Half Pack or More per Day among College Students vs. Others 1 to 4 Years beyond High School

(Twelfth graders included for comparison.)



CIGARETTES

Trends in 30-Day Prevalence of Smoking a Half Pack or More per Day among Male vs. Female College Students



Source. The Monitoring the Future study, the University of Michigan.

Note. Others refers to high school graduates one to four years beyond high school not currently enrolled full-time in college.

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